

**CPC****COOPERATIVE PATENT CLASSIFICATION****C12Y****ENZYMES****C12Y 101/00****Oxidoreductases acting on the CH-OH group of donors (1.1)**

- C12Y 101/01 . with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.1.1)
- C12Y 101/01001 .. Alcohol dehydrogenase (1.1.1.1)
- C12Y 101/01002 .. Alcohol dehydrogenase (NADP<sup>+</sup>) (1.1.1.2), i.e. aldehyde reductase
- C12Y 101/01003 .. Homoserine dehydrogenase (1.1.1.3)
- C12Y 101/01004 .. R,R-butanediol dehydrogenase (1.1.1.4)
- C12Y 101/01005 .. Acetoin dehydrogenase (1.1.1.5) ([C12Y 101/01303](#) , [C12Y 101/01304](#) takes precedence )
- C12Y 101/01006 .. Glycerol dehydrogenase (1.1.1.6)
- C12Y 101/01007 .. Propanediol-phosphate dehydrogenase (1.1.1.7)
- C12Y 101/01008 .. Glycerol-3-phosphate dehydrogenase (NAD<sup>+</sup>) (1.1.1.8)
- C12Y 101/01009 .. D-Xylulose reductase (1.1.1.9), i.e. xylitol dehydrogenase
- C12Y 101/0101 . L-Xylulose reductase (1.1.1.10)
- C12Y 101/01011 .. D-Arabinitol 4-dehydrogenase (1.1.1.11)
- C12Y 101/01012 .. L-Arabinitol 4-dehydrogenase (1.1.1.12)
- C12Y 101/01013 .. L-Arabinitol 2-dehydrogenase (1.1.1.13)
- C12Y 101/01014 .. L-Iditol 2-dehydrogenase (1.1.1.14), i.e. sorbitol-dehydrogenase
- C12Y 101/01015 .. D-iditol 2-dehydrogenase (1.1.1.15)
- C12Y 101/01016 .. Galactitol 2-dehydrogenase (1.1.1.16)
- C12Y 101/01017 .. Mannitol-1-phosphate 5-dehydrogenase (1.1.1.17)
- C12Y 101/01018 .. Inositol 2-dehydrogenase (1.1.1.18)
- C12Y 101/01019 .. Glucuronate reductase (1.1.1.19)
- C12Y 101/0102 . Glucuronolactone reductase (1.1.1.20)
- C12Y 101/01021 .. Aldehyde reductase (1.1.1.21), i.e. aldose-reductase
- C12Y 101/01022 .. UDP-glucose 6-dehydrogenase (1.1.1.22)
- C12Y 101/01023 .. Histidinol dehydrogenase (1.1.1.23)
- C12Y 101/01024 .. Quinate dehydrogenase (1.1.1.24)
- C12Y 101/01025 .. Shikimate dehydrogenase (1.1.1.25)
- C12Y 101/01026 .. Glyoxylate reductase (1.1.1.26)
- C12Y 101/01027 .. L-Lactate dehydrogenase (1.1.1.27)
- C12Y 101/01028 .. D-Lactate dehydrogenase (1.1.1.28)
- C12Y 101/01029 .. Glycerate dehydrogenase (1.1.1.29)
- C12Y 101/0103 . 3-Hydroxybutyrate dehydrogenase (1.1.1.30)
- C12Y 101/01031 .. 3-Hydroxyisobutyrate dehydrogenase (1.1.1.31)
- C12Y 101/01032 .. Mevaldate reductase (1.1.1.32)

C12Y 101/01033	..	Mevaldate reductase (NADPH) (1.1.1.33)
C12Y 101/01034	..	Hydroxymethylglutaryl-CoA reductase (NADPH) (1.1.1.34)
C12Y 101/01035	..	3-Hydroxyacyl-CoA dehydrogenase (1.1.1.35)
C12Y 101/01036	..	Acetoacetyl-CoA reductase (1.1.1.36)
C12Y 101/01037	..	Malate dehydrogenase (1.1.1.37)
C12Y 101/01038	..	Malate dehydrogenase (oxaloacetate-decarboxylating) (1.1.1.38)
C12Y 101/01039	..	Malate dehydrogenase (decarboxylating) (1.1.1.39)
C12Y 101/0104	..	Malate dehydrogenase (oxaloacetate-decarboxylating) (NADP+) (1.1.1.40)
C12Y 101/01041	..	Isocitrate dehydrogenase (NAD+) (1.1.1.41)
C12Y 101/01042	..	Isocitrate dehydrogenase (NADP+) (1.1.1.42)
C12Y 101/01043	..	Phosphogluconate 2-dehydrogenase (1.1.1.43)
C12Y 101/01044	..	Phosphogluconate dehydrogenase (decarboxylating) (1.1.1.44)
C12Y 101/01045	..	L-Gulonate 3-dehydrogenase (1.1.1.45)
C12Y 101/01046	..	L-Arabinose 1-dehydrogenase (1.1.1.46)
C12Y 101/01047	..	Glucose 1-dehydrogenase (1.1.1.47)
C12Y 101/01048	..	D-Galactose 1-dehydrogenase (1.1.1.48)
C12Y 101/01049	..	Glucose-6-phosphate dehydrogenase (1.1.1.49)
C12Y 101/0105	..	3-Alpha-hydroxysteroid dehydrogenase (B-specific) (1.1.1.50)
C12Y 101/01051	..	3 (or 17)-Beta-hydroxysteroid dehydrogenase (1.1.1.51)
C12Y 101/01052	..	3-Alpha-hydroxycholesterol dehydrogenase (1.1.1.52)
C12Y 101/01053	..	3-Alpha (or 20-beta)-hydroxysteroid dehydrogenase (1.1.1.53)
C12Y 101/01054	..	Allyl-alcohol dehydrogenase (1.1.1.54)
C12Y 101/01055	..	Lactaldehyde reductase (NADPH) (1.1.1.55)
C12Y 101/01056	..	Ribitol 2-dehydrogenase (1.1.1.56)
C12Y 101/01057	..	Fructuronate reductase (1.1.1.57)
C12Y 101/01058	..	Tagaturonate reductase (1.1.1.58)
C12Y 101/01059	..	3-Hydroxypropionate dehydrogenase (1.1.1.59)
C12Y 101/0106	..	2-Hydroxy-3-oxopropionate reductase (1.1.1.60)
C12Y 101/01061	..	4-Hydroxybutyrate dehydrogenase (1.1.1.61)
C12Y 101/01062	..	Estradiol 17-beta-dehydrogenase (1.1.1.62)
C12Y 101/01063	..	Testosterone 17-beta-dehydrogenase (1.1.1.63)
C12Y 101/01064	..	Testosterone 17-beta-dehydrogenase (NADP+) (1.1.1.64)
C12Y 101/01065	..	Pyridoxine 4-dehydrogenase (1.1.1.65)
C12Y 101/01066	..	Omega-hydroxydecanoate dehydrogenase (1.1.1.66)
C12Y 101/01067	..	Mannitol 2-dehydrogenase (1.1.1.67)
C12Y 101/01069	..	Gluconate 5-dehydrogenase (1.1.1.69)
C12Y 101/01071	..	Alcohol dehydrogenase [NAD(P)+] (1.1.1.71)
C12Y 101/01072	..	Glycerol dehydrogenase (NADP+) (1.1.1.72)
C12Y 101/01073	..	Octanol dehydrogenase (1.1.1.73)
C12Y 101/01075	..	(R)-Aminopropanol dehydrogenase (1.1.1.75)

C12Y 101/01076	..	(S,S)-Butanediol dehydrogenase (1.1.1.76)
C12Y 101/01077	..	Lactaldehyde reductase (1.1.1.77)
C12Y 101/01078	..	Methylglyoxal reductase (NADH-dependent) (1.1.1.78)
C12Y 101/01079	..	Glyoxylate reductase (NADP+) (1.1.1.79)
C12Y 101/0108	..	Isopropanol dehydrogenase (NADP+) (1.1.1.80)
C12Y 101/01081	..	Hydroxypyruvate reductase (1.1.1.81)
C12Y 101/01082	..	Malate dehydrogenase (NADP+) (1.1.1.82)
C12Y 101/01083	..	D-Malate dehydrogenase (decarboxylating) (1.1.1.83)
C12Y 101/01084	..	Dimethylmalate dehydrogenase (1.1.1.84)
C12Y 101/01085	..	3-Isopropylmalate dehydrogenase (1.1.1.85)
C12Y 101/01086	..	Ketol-acid reductoisomerase (1.1.1.86)
C12Y 101/01087	..	Homoisocitrate dehydrogenase (1.1.1.87)
C12Y 101/01088	..	Hydroxymethylglutaryl-CoA reductase (1.1.1.88)
C12Y 101/0109	..	Aryl-alcohol dehydrogenase (1.1.1.90)
C12Y 101/01091	..	Aryl-alcohol dehydrogenase (NADP+) (1.1.1.91)
C12Y 101/01092	..	Oxaloglycolate reductase (decarboxylating) (1.1.1.92)
C12Y 101/01093	..	Tartrate dehydrogenase (1.1.1.93)
C12Y 101/01094	..	Glycerol-3-phosphate dehydrogenase (NAD(P)+)(1.1.1.94)
C12Y 101/01095	..	Phosphoglycerate dehydrogenase (1.1.1.95)
C12Y 101/01096	..	Diiodophenylpyruvate reductase (1.1.1.96)
C12Y 101/01097	..	3-Hydroxybenzyl-alcohol dehydrogenase (1.1.1.97)
C12Y 101/01098	..	(R)-2-Hydroxy-fatty-acid dehydrogenase (1.1.1.98)
C12Y 101/01099	..	(S)-2-Hydroxy-fatty-acid dehydrogenase (1.1.1.99)
C12Y 101/011	..	3-Oxoacyl-[acyl-carrier-protein] reductase (1.1.1.100)
C12Y 101/01101	..	Acylglycerone-phosphate reductase (1.1.1.101)
C12Y 101/01102	..	3-Dehydrosphinganine reductase (1.1.1.102)
C12Y 101/01103	..	L-Threonine 3-dehydrogenase (1.1.1.103)
C12Y 101/01104	..	4-Oxoproline reductase (1.1.1.104)
C12Y 101/01105	..	Retinol dehydrogenase (1.1.1.105)
C12Y 101/01106	..	Pantoate 4-dehydrogenase (1.1.1.106)
C12Y 101/01107	..	Pyridoxal 4-dehydrogenase (1.1.1.107)
C12Y 101/01108	..	Carnitine 3-dehydrogenase (1.1.1.108)
C12Y 101/0111	..	Indolelactate dehydrogenase (1.1.1.110)
C12Y 101/01111	..	3-(Imidazol-5-yl)lactate dehydrogenase (1.1.1.111)
C12Y 101/01112	..	Indanol dehydrogenase (1.1.1.112)
C12Y 101/01113	..	L-Xylose 1-dehydrogenase (1.1.1.113)
C12Y 101/01114	..	Apiose 1-reductase (1.1.1.114)
C12Y 101/01115	..	Ribose 1-dehydrogenase (NADP+) (1.1.1.115)
C12Y 101/01116	..	D-Arabinose 1-dehydrogenase (1.1.1.116)
C12Y 101/01117	..	D-Arabinose 1-dehydrogenase (NAD(P)+)(1.1.1.117)

C12Y 101/01118	..	Glucose 1-dehydrogenase (NAD+) (1.1.1.118)
C12Y 101/01119	..	Glucose 1-dehydrogenase (NADP+) (1.1.1.119)
C12Y 101/0112	..	Galactose 1-dehydrogenase (NADP+) (1.1.1.120)
C12Y 101/01121	..	Aldose 1-dehydrogenase (1.1.1.121)
C12Y 101/01122	..	D-Threo-aldose 1-dehydrogenase (1.1.1.122)
C12Y 101/01123	..	Sorbose 5-dehydrogenase (NADP+) (1.1.1.123)
C12Y 101/01124	..	Fructose 5-dehydrogenase (NADP+) (1.1.1.124)
C12Y 101/01125	..	2-Deoxy-D-gluconate 3-dehydrogenase (1.1.1.125)
C12Y 101/01126	..	2-Dehydro-3-deoxy-D-gluconate 6-dehydrogenase (1.1.1.126)
C12Y 101/01127	..	2-Dehydro-3-deoxy-D-gluconate 5-dehydrogenase (1.1.1.127)
C12Y 101/01128	..	L-Idonate 2-dehydrogenase (1.1.1.128)
C12Y 101/01129	..	L-Threonate 3-dehydrogenase (1.1.1.129)
C12Y 101/0113	..	3-Dehydro-L-gulonate 2-dehydrogenase (1.1.1.130)
C12Y 101/01131	..	Mannuronate reductase (1.1.1.131)
C12Y 101/01132	..	GDP-mannose 6-dehydrogenase (1.1.1.132)
C12Y 101/01133	..	dTDP-4-dehydrorhamnose reductase (1.1.1.133)
C12Y 101/01134	..	dTDP-6-deoxy-L-talose 4-dehydrogenase (1.1.1.134)
C12Y 101/01135	..	GDP-6-deoxy-D-talose 4-dehydrogenase (1.1.1.135)
C12Y 101/01136	..	UDP-N-acetylglucosamine 6-dehydrogenase (1.1.1.136)
C12Y 101/01137	..	Ribitol-5-phosphate 2-dehydrogenase (1.1.1.137)
C12Y 101/01138	..	Mannitol 2-dehydrogenase (NADP+) (1.1.1.138)
C12Y 101/0114	..	Sorbitol-6-phosphate 2-dehydrogenase (1.1.1.140)
C12Y 101/01141	..	15-Hydroxyprostaglandin dehydrogenase (NAD+) (1.1.1.141)
C12Y 101/01142	..	D-Pinitol dehydrogenase (1.1.1.142)
C12Y 101/01143	..	Sequoyitol dehydrogenase (1.1.1.143)
C12Y 101/01144	..	Perillyl-alcohol dehydrogenase (1.1.1.144)
C12Y 101/01145	..	3-Beta-hydroxy-DELTA5-steroid dehydrogenase (1.1.1.145)
C12Y 101/01146	..	11-Beta-hydroxysteroid dehydrogenase (1.1.1.146)
C12Y 101/01147	..	16-Alpha-hydroxysteroid dehydrogenase (1.1.1.147)
C12Y 101/01148	..	Estradiol 17alpha-dehydrogenase (1.1.1.148)
C12Y 101/01149	..	20-Alpha-hydroxysteroid dehydrogenase (1.1.1.149)
C12Y 101/0115	..	21-Hydroxysteroid dehydrogenase (NAD+) (1.1.1.150)
C12Y 101/01151	..	21-Hydroxysteroid dehydrogenase (NADP+) (1.1.1.151)
C12Y 101/01152	..	3-Alpha-hydroxy-5-beta-androstane-17-one 3-alpha-dehydrogenase (1.1.1.152)
C12Y 101/01153	..	Sepiapterin reductase (1.1.1.153)
C12Y 101/01154	..	Ureidoglycolate dehydrogenase (1.1.1.154)
C12Y 101/01156	..	Glycerol 2-dehydrogenase (NADP+) (1.1.1.156)
C12Y 101/01157	..	3-Hydroxybutyryl-CoA dehydrogenase (1.1.1.157)
C12Y 101/01158	..	UDP-N-acetylmuramate dehydrogenase (1.1.1.158), i.e. UDP-N-acetylenolpyruvoylglucosamine reductase

C12Y 101/01159	..	7-Alpha-hydroxysteroid dehydrogenase (1.1.1.159)
C12Y 101/0116	..	Dihydrobunolol dehydrogenase (1.1.1.160)
C12Y 101/01161	..	Cholestanetetraol 26-dehydrogenase (1.1.1.161)
C12Y 101/01162	..	Erythrulose reductase (1.1.1.162)
C12Y 101/01163	..	Cyclopentanol dehydrogenase (1.1.1.163)
C12Y 101/01164	..	Hexadecanol dehydrogenase (1.1.1.164)
C12Y 101/01165	..	2-Alkyn-1-ol dehydrogenase (1.1.1.165)
C12Y 101/01166	..	Hydroxycyclohexanecarboxylate dehydrogenase (1.1.1.166)
C12Y 101/01167	..	Hydroxymalonate dehydrogenase (1.1.1.167)
C12Y 101/01168	..	2-Dehydropantolactone reductase (A-specific) (1.1.1.168)
C12Y 101/01169	..	2-Dehydropantoate 2-reductase (1.1.1.169), i.e. ketopantoate-reductase
C12Y 101/0117	..	Sterol-4-alpha-carboxylate 3-dehydrogenase (decarboxylating) (1.1.1.170)
C12Y 101/01172	..	2-Oxadipate reductase (1.1.1.172)
C12Y 101/01173	..	L-Rhamnose 1-dehydrogenase (1.1.1.173)
C12Y 101/01174	..	Cyclohexane-1,2-diol dehydrogenase (1.1.1.174)
C12Y 101/01175	..	D-Xylose 1-dehydrogenase (1.1.1.175)
C12Y 101/01176	..	12-Alpha-hydroxysteroid dehydrogenase (1.1.1.176)
C12Y 101/01177	..	Glycerol-3-phosphate 1-dehydrogenase (NADP+) (1.1.1.177)
C12Y 101/01178	..	3-Hydroxy-2-methylbutyryl-CoA dehydrogenase (1.1.1.178)
C12Y 101/01179	..	D-Xylose 1-dehydrogenase (NADP+) (1.1.1.179)
C12Y 101/01181	..	Cholest-5-ene-3-beta,7-alpha-diol 3-beta-dehydrogenase (1.1.1.181)
C12Y 101/01182	..	Fenchol dehydrogenase (1.1.1.182) ( <a href="#">C12Y 101/01198</a> , <a href="#">C12Y 101/01227</a> , <a href="#">C12Y 101/01228</a> take precedence )
C12Y 101/01183	..	Geraniol dehydrogenase (1.1.1.183)
C12Y 101/01184	..	Carbonyl reductase (NADPH) (1.1.1.184)
C12Y 101/01185	..	L-Glycol dehydrogenase (1.1.1.185)
C12Y 101/01186	..	dTDP-galactose 6-dehydrogenase (1.1.1.186)
C12Y 101/01187	..	GDP-4-dehydro-D-rhamnose reductase (1.1.1.187)
C12Y 101/01188	..	Prostaglandin-F synthase (1.1.1.188)
C12Y 101/01189	..	Prostaglandin-E(2) 9-reductase (1.1.1.189)
C12Y 101/0119	..	Indole-3-acetaldehyde reductase (NADH) (1.1.1.190)
C12Y 101/01191	..	Indole-3-acetaldehyde reductase (NADPH) (1.1.1.191)
C12Y 101/01192	..	Long-chain-alcohol dehydrogenase (1.1.1.192)
C12Y 101/01193	..	5-Amino-6-(5-phosphoribosylamino)uracil reductase (1.1.1.193)
C12Y 101/01194	..	Coniferyl-alcohol dehydrogenase (1.1.1.194)
C12Y 101/01195	..	Cinnamyl-alcohol dehydrogenase (1.1.1.195)
C12Y 101/01196	..	15-Hydroxyprostaglandin-D dehydrogenase (NADP+) (1.1.1.196)
C12Y 101/01197	..	15-Hydroxyprostaglandin dehydrogenase (NADP+) (1.1.1.197)
C12Y 101/01198	..	(+)-Borneol dehydrogenase (1.1.1.198)
C12Y 101/01199	..	(S)-Usnate reductase (1.1.1.199)

C12Y 101/012	..	Aldose-6-phosphate reductase (NADPH) (1.1.1.200)
C12Y 101/01201	..	7-Beta-hydroxysteroid dehydrogenase (NADP+) (1.1.1.201)
C12Y 101/01202	..	1,3-Propanediol dehydrogenase (1.1.1.202)
C12Y 101/01203	..	Uronate dehydrogenase (1.1.1.203)
C12Y 101/01205	..	IMP dehydrogenase (1.1.1.205)
C12Y 101/01206	..	Tropinone reductase I (1.1.1.206)
C12Y 101/01207	..	(-)-Menthol dehydrogenase (1.1.1.207)
C12Y 101/01208	..	(+)-Neomenthol dehydrogenase (1.1.1.208)
C12Y 101/01209	..	3 (or 17)-Alpha-hydroxysteroid dehydrogenase (1.1.1.209)
C12Y 101/0121	..	3-Beta (or 20-alpha)-hydroxysteroid dehydrogenase (1.1.1.210)
C12Y 101/01211	..	Long-chain-3-hydroxyacyl-CoA dehydrogenase (1.1.1.211)
C12Y 101/01212	..	3-Oxoacyl-[acyl-carrier-protein] reductase (NADH) (1.1.1.212)
C12Y 101/01213	..	3-Alpha-hydroxysteroid dehydrogenase A-specific (1.1.1.213)
C12Y 101/01214	..	2-Dehydropantolactone reductase (B-specific) (1.1.1.214)
C12Y 101/01215	..	Gluconate 2-dehydrogenase (1.1.1.215)
C12Y 101/01216	..	Farnesol dehydrogenase (1.1.1.216)
C12Y 101/01217	..	Benzyl-2-methyl-hydroxybutyrate dehydrogenase (1.1.1.217)
C12Y 101/01218	..	Morphine 6-dehydrogenase (1.1.1.218)
C12Y 101/01219	..	Dihydrokaempferol 4-reductase (1.1.1.219), i.e. dihydroflavonol-4-reductase
C12Y 101/0122	..	6-Pyruvoyltetrahydropterin 2'-reductase (1.1.1.220)
C12Y 101/01221	..	Vomifoliol dehydrogenase (1.1.1.221)
C12Y 101/01222	..	(R)-4-Hydroxyphenyllactate dehydrogenase (1.1.1.222)
C12Y 101/01223	..	Isopiperitenol dehydrogenase (1.1.1.223)
C12Y 101/01224	..	Mannose-6-phosphate 6-reductase (1.1.1.224)
C12Y 101/01225	..	Chlordecone reductase (1.1.1.225)
C12Y 101/01226	..	4-Hydroxycyclohexanecarboxylate dehydrogenase (1.1.1.226)
C12Y 101/01227	..	(-)-Borneol dehydrogenase (1.1.1.227)
C12Y 101/01228	..	(+)-Sabinol dehydrogenase (1.1.1.228)
C12Y 101/01229	..	Diethyl 2-methyl-3-oxosuccinate reductase (1.1.1.229)
C12Y 101/0123	..	3-Alpha-hydroxyglycyrrhetinate dehydrogenase (1.1.1.230)
C12Y 101/01231	..	15-Hydroxyprostaglandin-I dehydrogenase (NADP+) (1.1.1.231)
C12Y 101/01232	..	15-Hydroxyicosatetraenoate dehydrogenase (1.1.1.232)
C12Y 101/01233	..	N-Acylmannosamine 1-dehydrogenase (1.1.1.233)
C12Y 101/01234	..	Flavanone 4-reductase (1.1.1.234)
C12Y 101/01235	..	8-Oxocoformycin reductase (1.1.1.235)
C12Y 101/01236	..	Tropinone reductase II (1.1.1.236)
C12Y 101/01237	..	Hydroxyphenylpyruvate reductase (1.1.1.237)
C12Y 101/01238	..	12-Beta-hydroxysteroid dehydrogenase (1.1.1.238)
C12Y 101/01239	..	3-Alpha-(17-beta)-hydroxysteroid dehydrogenase (NAD+) (1.1.1.239)
C12Y 101/0124	..	N-Acetylhexosamine 1-dehydrogenase (1.1.1.240)



C12Y 101/01241	..	6-Endo-hydroxycineole dehydrogenase (1.1.1.241)
C12Y 101/01243	..	Carveol dehydrogenase (1.1.1.243)
C12Y 101/01244	..	Methanol dehydrogenase (1.1.1.244)
C12Y 101/01245	..	Cyclohexanol dehydrogenase (1.1.1.245)
C12Y 101/01246	..	Pterocarpin synthase (1.1.1.246)
C12Y 101/01247	..	Codeinone reductase (NADPH) (1.1.1.247)
C12Y 101/01248	..	Salutaridine reductase (NADPH) (1.1.1.248)
C12Y 101/0125	..	D-Arabinitol 2-dehydrogenase (1.1.1.250)
C12Y 101/01251	..	Galactitol-1-phosphate 5-dehydrogenase (1.1.1.251)
C12Y 101/01252	..	Tetrahydroxynaphthalene reductase (1.1.1.252)
C12Y 101/01254	..	(S)-Carnitine 3-dehydrogenase (1.1.1.254)
C12Y 101/01255	..	Mannitol dehydrogenase (1.1.1.255)
C12Y 101/01256	..	Fluoren-9-ol dehydrogenase (1.1.1.256)
C12Y 101/01257	..	4-(Hydroxymethyl)benzenesulfonate dehydrogenase (1.1.1.257)
C12Y 101/01258	..	6-Hydroxyhexanoate dehydrogenase (1.1.1.258)
C12Y 101/01259	..	3-Hydroxypimeloyl-CoA dehydrogenase (1.1.1.259)
C12Y 101/0126	..	Sulcatone reductase (1.1.1.260)
C12Y 101/01261	..	sn-Glycerol-1-phosphate dehydrogenase (1.1.1.261)
C12Y 101/01262	..	4-Hydroxythreonine-4-phosphate dehydrogenase (1.1.1.262)
C12Y 101/01263	..	1,5-Anhydro-D-fructose reductase (1.1.1.263)
C12Y 101/01264	..	L-Idonate 5-dehydrogenase (1.1.1.264)
C12Y 101/01265	..	3-Methylbutanal reductase (1.1.1.265)
C12Y 101/01266	..	dTDP-4-dehydro-6-deoxyglucose reductase (1.1.1.266)
C12Y 101/01267	..	1-Deoxy-D-xylulose-5-phosphate reductoisomerase (1.1.1.267)
C12Y 101/01268	..	2-(R)-Hydroxypropyl-CoM dehydrogenase (1.1.1.268)
C12Y 101/01269	..	2-(S)-Hydroxypropyl-CoM dehydrogenase (1.1.1.269)
C12Y 101/0127	..	3-Keto-steroid reductase (1.1.1.270)
C12Y 101/01271	..	GDP-L-fucose synthase (1.1.1.271)
C12Y 101/01272	..	(R)-2-Hydroxyacid dehydrogenase (1.1.1.272)
C12Y 101/01273	..	Vellosimine dehydrogenase (1.1.1.273)
C12Y 101/01274	..	2,5-Didehydrogluconate reductase (1.1.1.274), i.e. 2,5-diketo-D-gluconic acid reductase
C12Y 101/01275	..	(+)-Trans-carveol dehydrogenase (1.1.1.275)
C12Y 101/01276	..	Serine 3-dehydrogenase (1.1.1.276)
C12Y 101/01277	..	3-Beta-hydroxy-5-beta-steroid dehydrogenase (1.1.1.277)
C12Y 101/01278	..	3-Beta-hydroxy-5-alpha-steroid dehydrogenase (1.1.1.278)
C12Y 101/01279	..	(R)-3-Hydroxyacid-ester dehydrogenase (1.1.1.279)
C12Y 101/0128	..	(S)-3-Hydroxyacid-ester dehydrogenase (1.1.1.280)
C12Y 101/01281	..	GDP-4-dehydro-6-deoxy-D-mannose reductase (1.1.1.281)
C12Y 101/01282	..	Quinate/shikimate dehydrogenase (1.1.1.282)

C12Y 101/01283	..	Methylglyoxal reductase (NADPH-dependent) (1.1.1.283)
C12Y 101/01284	..	S-(hydroxymethyl)glutathione dehydrogenase (1.1.1.284), i.e. nitroreductase
C12Y 101/01285	..	3"-Deamino-3"-oxonicotianamine reductase (1.1.1.285)
C12Y 101/01286	..	Isocitrate--homoisocitrate dehydrogenase (1.1.1.286)
C12Y 101/01287	..	D-Arabinitol dehydrogenase (NADP+) (1.1.1.287)
C12Y 101/01288	..	Xanthoxin dehydrogenase (1.1.1.288)
C12Y 101/01289	..	Sorbose reductase (1.1.1.289)
C12Y 101/0129	..	4-Phosphoerythronate dehydrogenase (1.1.1.290)
C12Y 101/01291	..	2-Hydroxymethylglutarate dehydrogenase (1.1.1.291)
C12Y 101/01292	..	1,5-Anhydro-D-fructose reductase (1,5-anhydro-D-mannitol-forming) (1.1.1.292)
C12Y 101/01294	..	Chlorophyll(ide) b reductase (1.1.1.294)
C12Y 101/01295	..	Momilactone-A synthase (1.1.1.295)
C12Y 101/01296	..	Dihydrocarveol dehydrogenase (1.1.1.296)
C12Y 101/01297	..	Limonene-1,2-diol dehydrogenase (1.1.1.297)
C12Y 101/01298	..	3-Hydroxypropionate dehydrogenase (NADP+) (1.1.1.298)
C12Y 101/01299	..	Malate dehydrogenase (NAD(P)+)(1.1.1.299)
C12Y 101/013	..	NADP-retinol dehydrogenase (1.1.1.300)
C12Y 101/01301	..	D-Arabitol-phosphate dehydrogenase (1.1.1.301)
C12Y 101/01302	..	2,5-Diamino-6-(ribosylamino)-4(3H)-pyrimidinone 5'-phosphate reductase (1.1.1.302)
C12Y 101/01303	..	Diacetyl reductase, [(R)-acetoin forming] (1.1.1.303)
C12Y 101/01304	..	Diacetyl reductase, (S)-acetoin forming (1.1.1.304)
C12Y 101/01305	..	UDP-glucuronic acid dehydrogenase (UDP-4-keto-hexauronic acid decarboxylating)(1.1.1.305)
C12Y 101/01306	..	S-(Hydroxymethyl)mycothiol dehydrogenase (1.1.1.306)
C12Y 101/01307	..	D-Xylose reductase (1.1.1.307)
C12Y 101/01308	..	Sulfopropanediol 3-dehydrogenase (1.1.1.308)
C12Y 101/01309	..	Phosphonoacetaldehyde reductase (NADH) (1.1.1.309)
C12Y 101/0131	..	(S)-Sulfolactate dehydrogenase (1.1.1.310)
C12Y 101/01311	..	(S)-1-Phenylethanol dehydrogenase (1.1.1.311)
C12Y 101/01312	..	2-Hydroxy-4-carboxymuconate semialdehyde hemiacetal dehydrogenase (1.1.1.312)
C12Y 101/01313	..	Sulfoacetaldehyde reductase (1.1.1.313)
C12Y 101/01314	..	Germacrene A alcohol dehydrogenase (1.1.1.314)
C12Y 101/01315	..	11-Cis-retinol dehydrogenase (1.1.1.315)
C12Y 101/01316	..	L-Galactose 1-dehydrogenase (1.1.1.316)
C12Y 101/01317	..	Perakine reductase (1.1.1.317)
C12Y 101/01817	..	Sulfoacetaldehyde reductase (1.1.1.317)
C12Y 101/02	.	with a cytochrome as acceptor (1.1.2)
C12Y 101/02002	..	Mannitol dehydrogenase (cytochrome) (1.1.2.2)



C12Y 101/02003	..	L-Lactate dehydrogenase (cytochrome) (1.1.2.3)
C12Y 101/02004	..	D-lactate dehydrogenase (cytochrome) (1.1.2.4)
C12Y 101/02005	..	D-Lactate dehydrogenase (cytochrome c-553)(1.1.2.5)
C12Y 101/02006	..	Polyvinyl alcohol dehydrogenase (cytochrome) (1.1.2.6)
C12Y 101/02007	..	Methanol dehydrogenase (cytochrome c)(1.1.2.7)
C12Y 101/02008	..	Alcohol dehydrogenase (cytochrome c)(1.1.2.8)
C12Y 101/03	.	with a oxygen as acceptor (1.1.3)
C12Y 101/03003	..	Malate oxidase (1.1.3.3)
C12Y 101/03004	..	Glucose oxidase (1.1.3.4)
C12Y 101/03005	..	Hexose oxidase (1.1.3.5)
C12Y 101/03006	..	Cholesterol oxidase (1.1.3.6)
C12Y 101/03007	..	Aryl-alcohol oxidase (1.1.3.7)
C12Y 101/03008	..	L-Gulonolactone oxidase (1.1.3.8)
C12Y 101/03009	..	Galactose oxidase (1.1.3.9)
C12Y 101/0301	..	Pyranose oxidase (1.1.3.10)
C12Y 101/03011	..	L-sorbose oxidase (1.1.3.11)
C12Y 101/03012	..	Pyridoxine 4-oxidase (1.1.3.12)
C12Y 101/03013	..	Alcohol oxidase (1.1.3.13)
C12Y 101/03014	..	Catechol oxidase (dimerizing) (1.1.3.14)
C12Y 101/03015	..	(S)-2-Hydroxy-acid oxidase (1.1.3.15)
C12Y 101/03016	..	Ecdysone oxidase (1.1.3.16)
C12Y 101/03017	..	Choline oxidase (1.1.3.17)
C12Y 101/03018	..	Secondary-alcohol oxidase (1.1.3.18)
C12Y 101/03019	..	4-Hydroxymandelate oxidase (1.1.3.19)
C12Y 101/0302	..	Long-chain-alcohol oxidase (1.1.3.20)
C12Y 101/03021	..	Glycerol-3-phosphate-oxidase (1.1.3.21)
C12Y 101/03023	..	Thiamine oxidase (1.1.3.23)
C12Y 101/03027	..	Hydroxyphytanate oxidase (1.1.3.27)
C12Y 101/03028	..	Nucleoside oxidase (1.1.3.28)
C12Y 101/03029	..	N-Acylhexosamine oxidase (1.1.3.29)
C12Y 101/0303	..	Polyvinyl-alcohol oxidase (1.1.3.30)
C12Y 101/03037	..	D-Arabinono-1,4-lactone oxidase (1.1.3.37)
C12Y 101/03038	..	Vanillyl-alcohol oxidase (1.1.3.38)
C12Y 101/03039	..	Nucleoside oxidase (H <sub>2</sub> O <sub>2</sub> -forming) (1.1.3.39)
C12Y 101/0304	..	D-Mannitol oxidase (1.1.3.40)
C12Y 101/03041	..	Alditol oxidase (1.1.3.41)
C12Y 101/03042	..	Prosolanapyrone-II oxidase (1.1.3.42)
C12Y 101/04	.	with a disulfide as acceptor (1.1.4)
C12Y 101/04001	..	Vitamin-K-epoxide reductase (warfarin-sensitive) (1.1.4.1)

C12Y 101/04002	..	Vitamin-K-epoxide reductase (warfarin-insensitive) (1.1.4.2)
C12Y 101/05	.	with a quinone or similar compound as acceptor (1.1.5)
C12Y 101/05002	..	Quinoprotein glucose dehydrogenase (1.1.5.2)
C12Y 101/05003	..	Glycerol-3-phosphate dehydrogenase (1.1.5.3)
C12Y 101/05004	..	Malate dehydrogenase (quinone) (1.1.5.4)
C12Y 101/05005	..	Alcohol dehydrogenase (quinone) (1.1.5.5)
C12Y 101/05006	..	Formate dehydrogenase-N (1.1.5.6)
C12Y 101/05007	..	Cyclic alcohol dehydrogenase (quinone) (1.1.5.7)
C12Y 101/05008	..	Quinate dehydrogenase (quinone) (1.1.5.8)
C12Y 101/09	.	with a copper protein as acceptor (1.1.9)
C12Y 101/09001	..	Alcohol dehydrogenase (azurin) (1.1.9.1)
C12Y 101/98	.	with other, known, acceptors (1.1.98)
C12Y 101/98002	..	Glucose-6-phosphate dehydrogenase (coenzyme-F420) (1.1.98.2)
C12Y 101/99	.	with other acceptors (1.1.99)
C12Y 101/99001	..	Choline dehydrogenase (1.1.99.1)
C12Y 101/99002	..	2-Hydroxyglutarate dehydrogenase (1.1.99.2)
C12Y 101/99003	..	Gluconate 2-dehydrogenase (acceptor) (1.1.99.3)
C12Y 101/99004	..	Dehydrogluconate dehydrogenase (1.1.99.4)
C12Y 101/99006	..	D-2-Hydroxy-acid dehydrogenase (1.1.99.6)
C12Y 101/99007	..	Lactate--malate transhydrogenase (1.1.99.7)
C12Y 101/99008	..	Alcohol dehydrogenase (acceptor) (1.1.99.8) ( <a href="#">C12Y 101/02007</a> , <a href="#">C12Y 101/02008</a> take precedence )
C12Y 101/99009	..	Pyridoxine 5-dehydrogenase (1.1.99.9)
C12Y 101/9901	..	Glucose dehydrogenase (acceptor) (1.1.99.10)
C12Y 101/99011	..	Fructose 5-dehydrogenase (1.1.99.11)
C12Y 101/99012	..	Sorbose dehydrogenase (1.1.99.12)
C12Y 101/99013	..	Glucoside 3-dehydrogenase (1.1.99.13)
C12Y 101/99014	..	Glycolate dehydrogenase (1.1.99.14)
C12Y 101/99018	..	Cellobiose oxidase (1.1.99.18)
C12Y 101/9902	..	Alkan-1-ol dehydrogenase (acceptor) (1.1.99.20)
C12Y 101/99021	..	D-Sorbitol dehydrogenase (acceptor) (1.1.99.21)
C12Y 101/99022	..	Glycerol dehydrogenase (acceptor) (1.1.99.22)
C12Y 101/99024	..	Hydroxyacid-oxoacid transhydrogenase (1.1.99.24)
C12Y 101/99026	..	3-Hydroxycyclohexanone dehydrogenase (1.1.99.26)
C12Y 101/99027	..	(R)-Pantolactone dehydrogenase (flavin) (1.1.99.27)
C12Y 101/99028	..	Glucose-fructose oxidoreductase (1.1.99.28)
C12Y 101/99029	..	Pyranose dehydrogenase (acceptor) (1.1.99.29)
C12Y 101/9903	..	2-Oxo-acid reductase (1.1.99.30)

C12Y 101/99031	..	(S)-Mandelate dehydrogenase (1.1.99.31)
C12Y 101/99032	..	L-Sorbose 1-dehydrogenase (1.1.99.32)
C12Y 101/99033	..	Formate dehydrogenase (acceptor) (1.1.99.33)
C12Y 101/99035	..	Soluble quinoprotein glucose dehydrogenase (1.1.99.35)
C12Y 101/99036	..	NDMA-dependent alcohol dehydrogenase (1.1.99.36)
C12Y 101/99037	..	NDMA-dependent methanol dehydrogenase (1.1.99.37)

## **C12Y 102/00      Oxidoreductases acting on the aldehyde or oxo group of donors (1.2)**

C12Y 102/01	.	with NAD <sup>+</sup> or NADP <sup>+</sup> as acceptor (1.2.1)
C12Y 102/01001	..	Formaldehyde dehydrogenase (glutathione) (1.2.1.1) ( <a href="#">C12Y 101/01284</a> , <a href="#">C12Y 404/01022</a> take precedence )
C12Y 102/01002	..	Formate dehydrogenase (1.2.1.2)
C12Y 102/01003	..	Aldehyde dehydrogenase (NAD <sup>+</sup> ) (1.2.1.3)
C12Y 102/01004	..	Aldehyde dehydrogenase (NADP <sup>+</sup> ) (1.2.1.4)
C12Y 102/01005	..	Aldehyde dehydrogenase [NAD(P) <sup>+</sup> ] (1.2.1.5)
C12Y 102/01007	..	Benzaldehyde dehydrogenase (NADP <sup>+</sup> ) (1.2.1.7)
C12Y 102/01008	..	Betaine-aldehyde dehydrogenase (NADH) (1.2.1.8)
C12Y 102/01009	..	Glyceraldehyde-3-phosphate dehydrogenase (NADP <sup>+</sup> ) (1.2.1.9)
C12Y 102/0101	..	Acetaldehyde dehydrogenase (acetylating) (1.2.1.10)
C12Y 102/01011	..	Aspartate-semialdehyde dehydrogenase (1.2.1.11)
C12Y 102/01012	..	Glyceraldehyde-3-phosphate dehydrogenase (phosphorylating) (1.2.1.12)
C12Y 102/01013	..	Glyceraldehyde-3-phosphate dehydrogenase (NADP <sup>+</sup> ) (phosphorylating) (1.2.1.13)
C12Y 102/01015	..	Malonate-semialdehyde dehydrogenase (1.2.1.15)
C12Y 102/01016	..	Succinate-semialdehyde dehydrogenase [NAD(P) <sup>+</sup> ] (1.2.1.16)
C12Y 102/01017	..	Glyoxylate dehydrogenase (acylating) (1.2.1.17)
C12Y 102/01018	..	Malonate-semialdehyde dehydrogenase (acetylating) (1.2.1.18)
C12Y 102/01019	..	Aminobutyraldehyde dehydrogenase (1.2.1.19)
C12Y 102/0102	..	Glutarate-semialdehyde dehydrogenase (1.2.1.20)
C12Y 102/01021	..	Glycolaldehyde dehydrogenase (1.2.1.21)
C12Y 102/01022	..	Lactaldehyde dehydrogenase (1.2.1.22)
C12Y 102/01023	..	2-Oxoaldehyde dehydrogenase (NAD <sup>+</sup> ) (1.2.1.23)
C12Y 102/01024	..	Succinate-semialdehyde dehydrogenase (NAD <sup>+</sup> ) (1.2.1.24)
C12Y 102/01025	..	2-Oxoisovalerate dehydrogenase (acylating) (1.2.1.25)
C12Y 102/01026	..	2,5-Dioxovalerate dehydrogenase (1.2.1.26)
C12Y 102/01027	..	Methylmalonate-semialdehyde dehydrogenase (acylating) (1.2.1.27)
C12Y 102/01028	..	Benzaldehyde dehydrogenase (NAD <sup>+</sup> ) (1.2.1.28)
C12Y 102/01029	..	Aryl-aldehyde dehydrogenase (1.2.1.29)
C12Y 102/0103	..	Aryl-aldehyde dehydrogenase (NADP <sup>+</sup> ) (1.2.1.30)

C12Y 102/01031	..	L-Aminoadipate-semialdehyde dehydrogenase (1.2.1.31), i.e. alpha-aminoadipate reductase
C12Y 102/01032	..	Aminomuconate-semialdehyde dehydrogenase (1.2.1.32)
C12Y 102/01033	..	(R)-Dehydropantoate dehydrogenase (1.2.1.33)
C12Y 102/01036	..	Retinal dehydrogenase (1.2.1.36)
C12Y 102/01038	..	N-Acetyl-gamma-glutamyl-phosphate reductase (1.2.1.38)
C12Y 102/01039	..	Phenylacetaldehyde dehydrogenase (1.2.1.39)
C12Y 102/0104	..	3-Alpha,7-alpha,12-alpha-trihydroxycholestan-26-al 26-oxidoreductase (1.2.1.40)
C12Y 102/01041	..	Glutamate-5-semialdehyde dehydrogenase (1.2.1.41)
C12Y 102/01042	..	Hexadecanal dehydrogenase (acylating) (1.2.1.42), i.e. fatty acyl-CoA reductase
C12Y 102/01043	..	Formate dehydrogenase (NADP+) (1.2.1.43)
C12Y 102/01044	..	Cinnamoyl-CoA reductase (1.2.1.44)
C12Y 102/01046	..	Formaldehyde dehydrogenase (1.2.1.46)
C12Y 102/01047	..	4-Trimethylammonibutyraldehyde dehydrogenase (1.2.1.47)
C12Y 102/01048	..	Long-chain-aldehyde dehydrogenase (1.2.1.48)
C12Y 102/01049	..	2-Oxoaldehyde dehydrogenase (NADP+) (1.2.1.49)
C12Y 102/0105	..	Long-chain-fatty-acyl-CoA reductase (1.2.1.50)
C12Y 102/01051	..	Pyruvate dehydrogenase (NADP+) (1.2.1.51)
C12Y 102/01052	..	Oxoglutarate dehydrogenase (NADP+) (1.2.1.52)
C12Y 102/01053	..	4-Hydroxyphenylacetaldehyde dehydrogenase (1.2.1.53)
C12Y 102/01054	..	Gamma-guanidinobutyraldehyde dehydrogenase (1.2.1.54)
C12Y 102/01057	..	Butanal dehydrogenase (1.2.1.57)
C12Y 102/01058	..	Phenylglyoxylate dehydrogenase (acylating) (1.2.1.58)
C12Y 102/01059	..	Glyceraldehyde-3-phosphate dehydrogenase (NAD(P)+)(phosphorylating) (1.2.1.59)
C12Y 102/0106	..	5-Carboxymethyl-2-hydroxymuconic-semialdehyde dehydrogenase (1.2.1.60)
C12Y 102/01061	..	4-Hydroxymuconic-semialdehyde dehydrogenase (1.2.1.61)
C12Y 102/01062	..	4-Formylbenzenesulfonate dehydrogenase (1.2.1.62)
C12Y 102/01063	..	6-Oxohexanoate dehydrogenase (1.2.1.63)
C12Y 102/01064	..	4-Hydroxybenzaldehyde dehydrogenase (1.2.1.64)
C12Y 102/01065	..	Salicylaldehyde dehydrogenase (1.2.1.65)
C12Y 102/01067	..	Vanillin dehydrogenase (1.2.1.67)
C12Y 102/01068	..	Coniferyl-aldehyde dehydrogenase (1.2.1.68)
C12Y 102/01069	..	Fluoroacetaldehyde dehydrogenase (1.2.1.69)
C12Y 102/0107	..	Glutamyl-tRNA reductase (1.2.1.70)
C12Y 102/01071	..	Succinylglutamate-semialdehyde dehydrogenase (1.2.1.71)
C12Y 102/01072	..	Erythrose-4-phosphate dehydrogenase (1.2.1.72)
C12Y 102/01073	..	Sulfoacetaldehyde dehydrogenase (1.2.1.73)
C12Y 102/01074	..	Abietadienal dehydrogenase (1.2.1.74)
C12Y 102/01075	..	Malonyl CoA reductase (malonate semialdehyde-forming)(1.2.1.75)

C12Y 102/01076	.. Succinate-semialdehyde dehydrogenase (acetylating) (1.2.1.76)
C12Y 102/01077	.. 3,4-Dehydroadipyl-CoA semialdehyde dehydrogenase (NADP+) (1.2.1.77)
C12Y 102/01078	.. 2-Formylbenzoate dehydrogenase (1.2.1.78)
C12Y 102/01079	.. Succinate-semialdehyde dehydrogenase (NADP+) (1.2.1.79)
C12Y 102/0108	.. Long-chain acyl-[acyl-carrier-protein reductase (1.2.1.80)
C12Y 102/01081	.. Sulfoacetaldehyde dehydrogenase (acylating) (1.2.1.81)
C12Y 102/01082	.. Beta-apo-4'-carotenal oxygenase (1.2.1.82)
C12Y 102/02	. with a cytochrome as acceptor (1.2.2)
C12Y 102/02001	.. Formate dehydrogenase (cytochrome) (1.2.2.1)
C12Y 102/02003	.. Formate dehydrogenase (cytochrome c-553)(1.2.2.3)
C12Y 102/02004	.. Carbon-monoxide dehydrogenase (cytochrome b-561)(1.2.2.4)
C12Y 102/03	. with oxygen as acceptor (1.2.3)
C12Y 102/03001	.. Aldehyde oxidase (1.2.3.1)
C12Y 102/03003	.. Pyruvate oxidase (1.2.3.3)
C12Y 102/03004	.. Oxalate oxidase (1.2.3.4)
C12Y 102/03005	.. Glyoxylate oxidase (1.2.3.5)
C12Y 102/03006	.. Pyruvate oxidase (CoA-acetylating) (1.2.3.6)
C12Y 102/03007	.. Indole-3-acetaldehyde oxidase (1.2.3.7)
C12Y 102/03008	.. Pyridoxal oxidase (1.2.3.8)
C12Y 102/03009	.. Aryl-aldehyde oxidase (1.2.3.9)
C12Y 102/03011	.. Retinal oxidase (1.2.3.11)
C12Y 102/03013	.. 4-Hydroxyphenylpyruvate oxidase (1.2.3.13)
C12Y 102/03014	.. Absciscic-aldehyde oxidase (1.2.3.14)
C12Y 102/04	. with a disulfide as acceptor (1.2.4)
C12Y 102/04001	.. Pyruvate dehydrogenase (acetyl-transferring) (1.2.4.1)
C12Y 102/04002	.. Oxoglutarate dehydrogenase (succinyl-transferring) (1.2.4.2), i.e. alpha-ketoglutarat dehydrogenase
C12Y 102/04004	.. 3-Methyl-2-oxobutanoate dehydrogenase (2-methylpropanoyl-transferring) (1.2.4.4), i.e. branched-chain-alpha-ketoacid dehydrogenase
C12Y 102/05	. with a quinone or similar compound as acceptor (1.2.5)
C12Y 102/05001	.. Pyruvate dehydrogenase (quinone) (1.2.5.1)
C12Y 102/07	. with an iron-sulfur protein as acceptor (1.2.7)
C12Y 102/07001	.. Pyruvate synthase (1.2.7.1), i.e. pyruvate ferredoxin oxidoreductase
C12Y 102/07002	.. 2-Oxobutyrate synthase (1.2.7.2)
C12Y 102/07003	.. 2-Oxoglutarate synthase (1.2.7.3)
C12Y 102/07004	.. Carbon-monoxide dehydrogenase (ferredoxin) (1.2.7.4)
C12Y 102/07005	.. Aldehyde ferredoxin oxidoreductase (1.2.7.5)

C12Y 102/07006	..	Glyceraldehyde-3-phosphate dehydrogenase (ferredoxin) (1.2.7.6)
C12Y 102/07007	..	3-Methyl-2-oxobutanoate dehydrogenase (ferredoxin) (1.2.7.7)
C12Y 102/07008	..	Indolepyruvate ferredoxin oxidoreductase (1.2.7.8)
C12Y 102/0701	..	Oxalate oxidoreductase (1.2.7.10)
C12Y 102/99	.	with other acceptors (1.2.99)
C12Y 102/99002	..	Carbon-monoxide dehydrogenase (acceptor) (1.2.99.2)
C12Y 102/99003	..	Aldehyde dehydrogenase (pyrroloquinoline-quinone) (1.2.99.3)
C12Y 102/99004	..	Formaldehyde dismutase (1.2.99.4)
C12Y 102/99005	..	Formylmethanofuran dehydrogenase (1.2.99.5)
C12Y 102/99006	..	Carboxylate reductase (1.2.99.6)
C12Y 102/99007	..	Aldehyde dehydrogenase (FAD-independent) (1.2.99.7)

### **C12Y 103/00      Oxidoreductases acting on the CH-CH group of donors (1.3)**

C12Y 103/01	.	with NAD <sup>+</sup> or NADP <sup>+</sup> as acceptor (1.3.1)
C12Y 103/01001	..	Dihydropyrimidine dehydrogenase (NAD <sup>+</sup> ) (1.3.1.1)
C12Y 103/01002	..	Dihydropyrimidine dehydrogenase (NADP <sup>+</sup> ) (1.3.1.2)
C12Y 103/01003	..	DELTA4-3-oxosteroid 5-beta-reductase (1.3.1.3)
C12Y 103/01004	..	Cortisone alpha-reductase (1.3.1.4)
C12Y 103/01005	..	Cucurbitacin DELTA23-reductase (1.3.1.5)
C12Y 103/01006	..	Fumarate reductase (NADH) (1.3.1.6)
C12Y 103/01007	..	Meso-tartrate dehydrogenase (1.3.1.7)
C12Y 103/01008	..	Acyl-CoA dehydrogenase (NADP <sup>+</sup> ) (1.3.1.8)
C12Y 103/01009	..	Enoyl-[acyl-carrier-protein] reductase (NADH) (1.3.1.9)
C12Y 103/0101	..	Enoyl-[acyl-carrier-protein] reductase (NADPH, B-specific)(1.3.1.10)
C12Y 103/01011	..	2-Coumarate reductase (1.3.1.11)
C12Y 103/01012	..	Prephenate dehydrogenase (1.3.1.12)
C12Y 103/01013	..	Prephenate dehydrogenase (NADP <sup>+</sup> ) (1.3.1.13)
C12Y 103/01014	..	Dihydroorotate dehydrogenase (NAD <sup>+</sup> ) (1.3.1.14)
C12Y 103/01015	..	Dihydroorotate dehydrogenase (NADP <sup>+</sup> ) (1.3.1.15)
C12Y 103/01016	..	Beta-nitroacrylate reductase (1.3.1.16)
C12Y 103/01017	..	3-Methyleneoxindole reductase (1.3.1.17)
C12Y 103/01018	..	Kynurenate-7,8-dihydrodiol dehydrogenase (1.3.1.18)
C12Y 103/01019	..	Cis-1,2-dihydrobenzene-1,2-diol dehydrogenase (1.3.1.19)
C12Y 103/0102	..	Trans-1,2-dihydrobenzene-1,2-diol dehydrogenase (1.3.1.20)
C12Y 103/01021	..	7-Dehydrocholesterol reductase (1.3.1.21)
C12Y 103/01022	..	Cholestenone 5-alpha-reductase (1.3.1.22)
C12Y 103/01024	..	Biliverdin reductase (1.3.1.24)
C12Y 103/01025	..	1,6-Dihydroxycyclohexa-2,4-diene-1-carboxylate dehydrogenase (1.3.1.25)



C12Y 103/01026	..	Dihydrodipicolinate reductase (1.3.1.26)
C12Y 103/01027	..	2-Hexadecenal reductase (1.3.1.27)
C12Y 103/01028	..	2,3-Dihydro-2,3-dihydroxybenzoate dehydrogenase (1.3.1.28)
C12Y 103/01029	..	Cis-1,2-dihydro-1,2-dihydroxynaphthalene dehydrogenase (1.3.1.29)
C12Y 103/0103	..	Progesterone 5-alpha-reductase (1.3.1.30), i.e. steroid-5-alpha-reductase
C12Y 103/01031	..	2-Enoate reductase (1.3.1.31)
C12Y 103/01032	..	Maleylacetate reductase (1.3.1.32)
C12Y 103/01033	..	Protochlorophyllide reductase (1.3.1.33)
C12Y 103/01034	..	2,4-dienoyl-CoA reductase (NADPH) (1.3.1.34)
C12Y 103/01035	..	Phosphatidylcholine desaturase (1.3.1.35)
C12Y 103/01036	..	Geissoschizine dehydrogenase (1.3.1.36)
C12Y 103/01037	..	Cis-2-enoyl-CoA reductase (NADPH) (1.3.1.37)
C12Y 103/01038	..	Trans-2-enoyl-CoA reductase (NADPH) (1.3.1.38)
C12Y 103/01039	..	Enoyl-[acyl-carrier-protein reductase (NADPH, A-specific)(1.3.1.39)
C12Y 103/0104	..	2-Hydroxy-6-oxo-6-phenylhexa-2,4-dienoate reductase (1.3.1.40)
C12Y 103/01041	..	Xanthommatin reductase (1.3.1.41)
C12Y 103/01042	..	12-Oxophytodienoate reductase (1.3.1.42), i.e. morphinone-reductase
C12Y 103/01043	..	Arogenate dehydrogenase (1.3.1.43)
C12Y 103/01044	..	Trans-2-enoyl-CoA reductase (NAD+) (1.3.1.44)
C12Y 103/01045	..	2'-Hydroxyisoflavone reductase (1.3.1.45)
C12Y 103/01046	..	Biochanin-A reductase (1.3.1.46)
C12Y 103/01047	..	Alpha-santonin 1,2-reductase (1.3.1.47)
C12Y 103/01048	..	15-Oxoprostaglandin 13-oxidase (1.3.1.48)
C12Y 103/01049	..	Cis-3,4-dihydrophenanthrene-3,4-diol dehydrogenase (1.3.1.49)
C12Y 103/01051	..	2'-Hydroxydaidzein reductase (1.3.1.51)
C12Y 103/01052	..	2-Methyl-branched-chain-enoyl-CoA reductase (1.3.1.52)
C12Y 103/01053	..	(3S,4R)-3,4-dihydroxycyclohexa-1,5-diene-1,4-dicarboxylate dehydrogenase (1.3.1.53)
C12Y 103/01054	..	Precorrin-6A reductase (1.3.1.54)
C12Y 103/01056	..	Cis-2,3-dihydrobiphenyl-2,3-diol dehydrogenase (1.3.1.56)
C12Y 103/01057	..	Phloroglucinol reductase (1.3.1.57)
C12Y 103/01058	..	2,3-Dihydroxy-2,3-dihydro-p-cumate dehydrogenase (1.3.1.58)
C12Y 103/0106	..	Dibenzothiophene dihydrodiol dehydrogenase (1.3.1.60)
C12Y 103/01062	..	Pimeloyl-CoA dehydrogenase (1.3.1.62)
C12Y 103/01063	..	2,4-Dichlorobenzoyl-CoA reductase (1.3.1.63)
C12Y 103/01064	..	Phthalate 4,5-cis-dihydrodiol dehydrogenase (1.3.1.64)
C12Y 103/01065	..	5,6-Dihydroxy-3-methyl-2-oxo-1,2,5,6-tetrahydroquinoline dehydrogenase (1.3.1.65)
C12Y 103/01066	..	Cis-dihydroethylcatechol dehydrogenase (1.3.1.66)
C12Y 103/01067	..	Cis-1,2-dihydroxy-4-methylcyclohexa-3,5-diene-1-carboxylate dehydrogenase (1.3.1.67)

C12Y 103/01068	..	1,2-Dihydroxy-6-methylcyclohexa-3,5-dienecarboxylate dehydrogenase (1.3.1.68)
C12Y 103/01069	..	Zeatin reductase (1.3.1.69)
C12Y 103/0107	..	DELTA14-sterol reductase (1.3.1.70)
C12Y 103/01071	..	DELTA24 (24(1))-sterol reductase (1.3.1.71)
C12Y 103/01072	..	DELTA24-sterol reductase (1.3.1.72)
C12Y 103/01073	..	1,2-Dihydrovomilenine reductase (1.3.1.73)
C12Y 103/01074	..	2-Alkenal reductase (1.3.1.74)
C12Y 103/01075	..	Divinyl chlorophyllide a 8-vinyl-reductase (1.3.1.75)
C12Y 103/01076	..	Precorrin-2 dehydrogenase (1.3.1.76)
C12Y 103/01077	..	Anthocyanidin reductase (1.3.1.77)
C12Y 103/01078	..	Arogenate dehydrogenase (NADP+) (1.3.1.78)
C12Y 103/01079	..	Arogenate dehydrogenase (NAD(P)+)(1.3.1.79)
C12Y 103/0108	..	Red chlorophyll catabolite reductase (1.3.1.80)
C12Y 103/01081	..	(+)-Pulegone reductase (1.3.1.81)
C12Y 103/01082	..	(-)-Isopiperitenone reductase (1.3.1.82)
C12Y 103/01083	..	Geranylgeranyl diphosphate reductase (1.3.1.83)
C12Y 103/01084	..	Acrylyl-CoA reductase (NADPH) (1.3.1.84)
C12Y 103/01085	..	Crotonyl-CoA carboxylase/reductase (1.3.1.85)
C12Y 103/01086	..	Crotonyl-CoA reductase (1.3.1.86)
C12Y 103/01087	..	3-(Cis-5,6-dihydroxycyclohexa-1,3-dien-1-yl)propanoate dehydrogenase (1.3.1.87)
C12Y 103/01088	..	tRNA-dihydrouridine16/17 synthase (NAD(P)+)(1.3.1.88)
C12Y 103/01089	..	tRNA-dihydrouridine47 synthase (NAD(P)+)(1.3.1.89)
C12Y 103/0109	..	tRNA-dihydrouridine20a/20b synthase (NAD(P)+)(1.3.1.90)
C12Y 103/01091	..	tRNA-dihydrouridine20 synthase (NAD(P)+)(1.3.1.91)
C12Y 103/02	.	with a cytochrome as acceptor (1.3.2)
C12Y 103/02003	..	L-Galactonolactone dehydrogenase (1.3.2.3)
C12Y 103/03	.	with oxygen as acceptor (1.3.3)
C12Y 103/03003	..	Coproporphyrinogen oxidase (1.3.3.3)
C12Y 103/03004	..	Protoporphyrinogen oxidase (1.3.3.4)
C12Y 103/03005	..	Bilirubin oxidase (1.3.3.5)
C12Y 103/03006	..	Acyl-CoA oxidase (1.3.3.6)
C12Y 103/03007	..	Dihydrouracil oxidase (1.3.3.7)
C12Y 103/03008	..	Tetrahydroberberine oxidase (1.3.3.8)
C12Y 103/03009	..	Secologanin synthase (1.3.3.9)
C12Y 103/0301	..	Tryptophan alpha,beta-oxidase (1.3.3.10)
C12Y 103/03011	..	Pyrroloquinoline-quinone synthase (1.3.3.11)
C12Y 103/03012	..	L-Galactonolactone oxidase (1.3.3.12)
C12Y 103/05	.	with a quinone or related compound as acceptor (1.3.5)

C12Y 103/05001	..	Succinate dehydrogenase (ubiquinone) (1.3.5.1)
C12Y 103/05002	..	Dihydroorotate dehydrogenase (1.3.5.2)
C12Y 103/05003	..	Protoporphyrinogen IX dehydrogenase (menaquinone) (1.3.5.3)
C12Y 103/05004	..	Fumarate reductase (menaquinone) (1.3.5.4)
C12Y 103/05005	..	15-Cis-phytoene desaturase (1.3.5.5)
C12Y 103/05006	..	9,9'-Di-cis-zeta-carotene desaturase (1.3.5.6)
C12Y 103/07	.	with an iron-sulfur protein as acceptor (1.3.7)
C12Y 103/07001	..	6-Hydroxynicotinate reductase (1.3.7.1)
C12Y 103/07002	..	15,16-Dihydrobiliverdin:ferredoxin oxidoreductase (1.3.7.2)
C12Y 103/07003	..	Phycocerythrobilin:ferredoxin oxidoreductase (1.3.7.3)
C12Y 103/07004	..	Phytochromobilin:ferredoxin oxidoreductase (1.3.7.4)
C12Y 103/07005	..	Phycocyanobilin:ferredoxin oxidoreductase (1.3.7.5)
C12Y 103/07006	..	Phycocerythrobilin synthase (1.3.7.6)
C12Y 103/07007	..	Ferredoxin:protochlorophyllide reductase (ATP-dependent) (1.3.7.7)
C12Y 103/07008	..	Benzoyl-CoA reductase (1.3.7.8)
C12Y 103/07009	..	4-Hydroxybenzoyl-CoA reductase (1.3.7.9)
C12Y 103/08	.	with flavin as acceptor (1.3.8)
C12Y 103/08001	..	Butyryl-CoA dehydrogenase (1.3.8.1), i.e. short chain acyl-CoA dehydrogenase
C12Y 103/08002	..	4,4'-Diapophytoene desaturase (1.3.8.2)
C12Y 103/98	.	with other, known, acceptors (1.3.98)
C12Y 103/98001	..	Dihydroorotate oxidase (fumarate) (1.3.98.1)
C12Y 103/99	.	with other acceptors (1.3.99)
C12Y 103/99001	..	Succinate dehydrogenase (1.3.99.1)
C12Y 103/99002	..	Butyryl-CoA dehydrogenase (1.3.99.2), i.e. short chain acyl-CoA dehydrogenase
C12Y 103/99003	..	Acyl-CoA dehydrogenase (1.3.99.3)
C12Y 103/99004	..	3-Oxosteroid 1-dehydrogenase (1.3.99.4)
C12Y 103/99005	..	3-Oxo-5-alpha-steroid 4-dehydrogenase (1.3.99.5), i.e. steroid-5-alpha-reductase
C12Y 103/99006	..	3-Oxo-5-beta-steroid 4-dehydrogenase (1.3.99.6)
C12Y 103/99007	..	Glutaryl-CoA dehydrogenase (1.3.99.7)
C12Y 103/99008	..	2-Furoyl-CoA dehydrogenase (1.3.99.8)
C12Y 103/9901	..	Isovaleryl-CoA dehydrogenase (1.3.99.10)
C12Y 103/99012	..	2-Methylacyl-CoA dehydrogenase (1.3.99.12)
C12Y 103/99013	..	Long-chain-acyl-CoA dehydrogenase (1.3.99.13)
C12Y 103/99014	..	Cyclohexanone dehydrogenase (1.3.99.14)
C12Y 103/99016	..	Isoquinoline 1-oxidoreductase (1.3.99.16)
C12Y 103/99017	..	Quinoline 2-oxidoreductase (1.3.99.17)
C12Y 103/99018	..	Quinaldate 4-oxidoreductase (1.3.99.18)

C12Y 103/99019	..	Quinoline-4-carboxylate 2-oxidoreductase (1.3.99.19)
C12Y 103/99021	..	(R)-Benzylsuccinyl-CoA dehydrogenase (1.3.99.21)
C12Y 103/99022	..	Coproporphyrinogen dehydrogenase (1.3.99.22)
C12Y 103/99023	..	All-trans-retinol 13,14-reductase (1.3.99.23)
C12Y 103/99024	..	2-Amino-4-deoxychorismate dehydrogenase (1.3.99.24)
C12Y 103/99025	..	Carvone reductase (1.3.99.25)
C12Y 103/99026	..	All-trans-zeta-carotene desaturase (1.3.99.26)
C12Y 103/99027	..	1-Hydroxycarotenoid 3,4-desaturase (1.3.99.27)
C12Y 103/99028	..	Phytoene desaturase (neurosporene-forming) (1.3.99.28)
C12Y 103/99029	..	Phytoene desaturase (zeta-carotene-forming) (1.3.99.29)
C12Y 103/9903	..	Phytoene desaturase (3,4-didehydrolycopene-forming) (1.3.99.30)
C12Y 103/99031	..	Phytoene desaturase (lycopene-forming) (1.3.99.31)

#### **C12Y 104/00      Oxidoreductases acting on the CH-NH<sub>2</sub> group of donors (1.4)**

C12Y 104/01	.	with NAD <sup>+</sup> or NADP <sup>+</sup> as acceptor (1.4.1)
C12Y 104/01001	..	Alanine dehydrogenase (1.4.1.1)
C12Y 104/01002	..	Glutamate dehydrogenase (1.4.1.2)
C12Y 104/01003	..	Glutamate dehydrogenase (NAD(P) <sup>+</sup> ) (1.4.1.3)
C12Y 104/01004	..	Glutamate dehydrogenase (NADP <sup>+</sup> ) (1.4.1.4)
C12Y 104/01005	..	L-Amino-acid dehydrogenase (1.4.1.5)
C12Y 104/01007	..	Serine 2-dehydrogenase (1.4.1.7)
C12Y 104/01008	..	Valine dehydrogenase (NADP <sup>+</sup> ) (1.4.1.8)
C12Y 104/01009	..	Leucine dehydrogenase (1.4.1.9)
C12Y 104/0101	..	Glycine dehydrogenase (1.4.1.10)
C12Y 104/01011	..	L-Erythro-3,5-diaminohexanoate dehydrogenase (1.4.1.11)
C12Y 104/01012	..	2,4-Diaminopentanoate dehydrogenase (1.4.1.12)
C12Y 104/01013	..	Glutamate synthase (NADPH) (1.4.1.13)
C12Y 104/01014	..	Glutamate synthase (NADH) (1.4.1.14)
C12Y 104/01015	..	Lysine dehydrogenase (1.4.1.15)
C12Y 104/01016	..	Diaminopimelate dehydrogenase (1.4.1.16)
C12Y 104/01017	..	N-Methylalanine dehydrogenase (1.4.1.17)
C12Y 104/01018	..	Lysine 6-dehydrogenase (1.4.1.18)
C12Y 104/01019	..	Tryptophan dehydrogenase (1.4.1.19)
C12Y 104/0102	..	Phenylalanine dehydrogenase (1.4.1.20)
C12Y 104/01021	..	Aspartate dehydrogenase (1.4.1.21)
C12Y 104/02	.	with a cytochrome as acceptor (1.4.2)
C12Y 104/02001	..	Glycine dehydrogenase (cytochrome) (1.4.2.1)
C12Y 104/03	.	with oxygen as acceptor (1.4.3)

<a href="#">C12Y 104/03001</a>	..	D-Aspartate oxidase (1.4.3.1)
<a href="#">C12Y 104/03002</a>	..	L-Amino-acid oxidase (1.4.3.2)
<a href="#">C12Y 104/03003</a>	..	D-Amino-acid oxidase (1.4.3.3)
<a href="#">C12Y 104/03004</a>	..	Monoamine oxidase (1.4.3.4)
<a href="#">C12Y 104/03005</a>	..	Pyridoxal 5'-phosphate synthase (1.4.3.5), i.e. pyridoxamine 5-phosphate oxidase
<a href="#">C12Y 104/03006</a>	..	Amine oxidase ( <a href="#">copper-containing</a> )(1.4.3.6) ( <a href="#">C12Y 104/03021</a> or <a href="#">C12Y 104/03022</a> takes precedence )
<a href="#">C12Y 104/03007</a>	..	D-Glutamate oxidase (1.4.3.7)
<a href="#">C12Y 104/03008</a>	..	Ethanolamine oxidase (1.4.3.8)
<a href="#">C12Y 104/0301</a>	..	Putrescine oxidase (1.4.3.10)
<a href="#">C12Y 104/03011</a>	..	L-Glutamate oxidase (1.4.3.11)
<a href="#">C12Y 104/03012</a>	..	Cyclohexylamine oxidase (1.4.3.12)
<a href="#">C12Y 104/03013</a>	..	Protein-lysine 6-oxidase (1.4.3.13), i.e. lysyl-oxidase
<a href="#">C12Y 104/03014</a>	..	L-Lysine oxidase (1.4.3.14)
<a href="#">C12Y 104/03015</a>	..	D-Glutamate(D-aspartate) oxidase (1.4.3.15)
<a href="#">C12Y 104/03016</a>	..	L-Aspartate oxidase (1.4.3.16)
<a href="#">C12Y 104/03019</a>	..	Glycine oxidase (1.4.3.19)
<a href="#">C12Y 104/0302</a>	..	L-Lysine 6-oxidase (1.4.3.20)
<a href="#">C12Y 104/03021</a>	..	Primary-amine oxidase (1.4.3.21), i.e VAP-1
<a href="#">C12Y 104/03022</a>	..	Diamine oxidase (1.4.3.22)
<a href="#">C12Y 104/03023</a>	..	7-Chloro-L-tryptophan oxidase (1.4.3.23)
<a href="#">C12Y 104/04</a>	.	with a disulfide as acceptor (1.4.4)
<a href="#">C12Y 104/04002</a>	..	Glycine dehydrogenase (decarboxylating) (1.4.4.2)
<a href="#">C12Y 104/05</a>	.	with a quinone or similar compound as acceptor (1.4.5)
<a href="#">C12Y 104/05001</a>	..	D-Amino acid dehydrogenase (quinone) (1.4.5.1)
<a href="#">C12Y 104/07</a>	.	with an iron-sulfur protein as acceptor (1.4.7)
<a href="#">C12Y 104/07001</a>	..	Glutamate synthase (ferredoxin) (1.4.7.1)
<a href="#">C12Y 104/09</a>	.	with a copper protein as acceptor (1.4.9)
<a href="#">C12Y 104/09001</a>	..	Methylamine dehydrogenase (amicyanin) (1.4.9.1)
<a href="#">C12Y 104/09002</a>	..	Aralkylamine dehydrogenase (azurin) (1.4.9.2)
<a href="#">C12Y 104/98</a>	.	with other, known, acceptors (1.4.98)
<a href="#">C12Y 104/99</a>	.	with other acceptors (1.4.99)
<a href="#">C12Y 104/99001</a>	..	D-Amino-acid dehydrogenase (1.4.99.1)
<a href="#">C12Y 104/99002</a>	..	Taurine dehydrogenase (1.4.99.2)
<a href="#">C12Y 104/99003</a>	..	Amine dehydrogenase (1.4.99.3)
<a href="#">C12Y 104/99005</a>	..	Glycine dehydrogenase (cyanide-forming) (1.4.99.5)

**C12Y 105/00****Oxidoreductases acting on the CH-NH group of donors (1.5)**

- C12Y 105/01 . with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.5.1)
- C12Y 105/01001 .. Pyrroline-2-carboxylate reductase (1.5.1.1)
- C12Y 105/01002 .. Pyrroline-5-carboxylate reductase (1.5.1.2)
- C12Y 105/01003 .. Dihydrofolate reductase (1.5.1.3)
- C12Y 105/01005 .. Methylene-tetrahydrofolate dehydrogenase (NADP<sup>+</sup>) (1.5.1.5)
- C12Y 105/01006 .. Formyltetrahydrofolate dehydrogenase (1.5.1.6)
- C12Y 105/01007 .. Saccharopine dehydrogenase (NAD<sup>+</sup>, L-lysine-forming)(1.5.1.7)
- C12Y 105/01008 .. Saccharopine dehydrogenase (NADP<sup>+</sup>, L-lysine-forming)(1.5.1.8)
- C12Y 105/01009 .. Saccharopine dehydrogenase (NAD<sup>+</sup>, L-glutamate-forming)(1.5.1.9)
- C12Y 105/0101 .. Saccharopine dehydrogenase (NADP<sup>+</sup>, L-glutamate-forming)(1.5.1.10)
- C12Y 105/01011 .. D-Octopine dehydrogenase (1.5.1.11)
- C12Y 105/01012 .. 1-Pyrroline-5-carboxylate dehydrogenase (1.5.1.12)
- C12Y 105/01015 .. Methylene-tetrahydrofolate dehydrogenase (NAD<sup>+</sup>) (1.5.1.15)
- C12Y 105/01016 .. D-Lysopine dehydrogenase (1.5.1.16)
- C12Y 105/01017 .. Alanopine dehydrogenase (1.5.1.17)
- C12Y 105/01018 .. Ephedrine dehydrogenase (1.5.1.18)
- C12Y 105/01019 .. D-Nopaline dehydrogenase (1.5.1.19), i.e. D-nopaline synthase
- C12Y 105/0102 .. Methylene-tetrahydrofolate reductase [NAD(P)H] (1.5.1.20)
- C12Y 105/01021 .. DELTA1-piperidine-2-carboxylate reductase (1.5.1.21)
- C12Y 105/01022 .. Strombine dehydrogenase (1.5.1.22)
- C12Y 105/01023 .. Tauropine dehydrogenase (1.5.1.23)
- C12Y 105/01024 .. N5-(Carboxyethyl)ornithine synthase (1.5.1.24)
- C12Y 105/01025 .. Thiomorpholine-carboxylate dehydrogenase (1.5.1.25)
- C12Y 105/01026 .. Beta-alanopine dehydrogenase (1.5.1.26)
- C12Y 105/01027 .. 1,2-Dehydroreticulium reductase (NADPH) (1.5.1.27)
- C12Y 105/01028 .. Opine dehydrogenase (1.5.1.28)
- C12Y 105/01029 .. FMN reductase (1.5.1.29)
- C12Y 105/0103 .. Flavin reductase (1.5.1.30)
- C12Y 105/01031 .. Berberine reductase (1.5.1.31)
- C12Y 105/01032 .. Vomilenine reductase (1.5.1.32)
- C12Y 105/01033 .. Pteridine reductase (1.5.1.33)
- C12Y 105/01034 .. 6,7-Dihydropteridine reductase (1.5.1.34)
- C12Y 105/01036 .. Flavin reductase (NADH) (1.5.1.36)
- C12Y 105/01037 .. FAD reductase (NADH) (1.5.1.37)
- C12Y 105/01038 .. FMN reductase (NADPH) (1.5.1.38)
- C12Y 105/01039 .. FMN reductase (NAD(P)H)(1.5.1.39)
- C12Y 105/0104 .. 8-Hydroxy-5-deazaflavin:NADPH oxidoreductase (1.5.1.40)



C12Y 105/01041	..	Riboflavin reductase (NAD(P)H)(1.5.1.41)
C12Y 105/01042	..	FMN reductase (NADH) (1.5.1.42)
C12Y 105/03	.	with oxygen as acceptor (1.5.3)
C12Y 105/03001	..	Sarcosine oxidase (1.5.3.1)
C12Y 105/03002	..	N-Methyl-L-amino-acid oxidase (1.5.3.2)
C12Y 105/03004	..	N6-Methyl-lysine oxidase (1.5.3.4)
C12Y 105/03005	..	(S)-6-Hydroxynicotine oxidase (1.5.3.5)
C12Y 105/03006	..	(R)-6-Hydroxynicotine oxidase (1.5.3.6)
C12Y 105/03007	..	L-Pipecolate oxidase (1.5.3.7)
C12Y 105/0301	..	Dimethylglycine oxidase (1.5.3.10)
C12Y 105/03011	..	Polyamine oxidase (1.5.3.11) ( <a href="#">C12Y 105/03013 - C12Y 105/03017 take precedence</a> )
C12Y 105/03012	..	Dihydrobenzophenanthridine oxidase (1.5.3.12)
C12Y 105/03013	..	N1-Acetylpolyamine oxidase (1.5.3.13)
C12Y 105/03014	..	Polyamine oxidase (propane-1,3-diamine-forming) (1.5.3.14)
C12Y 105/03015	..	N8-Acetylspermidine oxidase (propane-1,3-diamine-forming) (1.5.3.15)
C12Y 105/03016	..	Spermine oxidase (1.5.3.16)
C12Y 105/03017	..	Non-specific polyamine oxidase (1.5.3.17)
C12Y 105/03018	..	L-Saccharopine oxidase (1.5.3.18)
C12Y 105/04	.	with a disulfide as acceptor (1.5.4)
C12Y 105/04001	..	Pyrimidodiazepine synthase (1.5.4.1)
C12Y 105/05	.	with a quinone or similar compound as acceptor (1.5.5)
C12Y 105/05001	..	Electron-transferring-flavoprotein dehydrogenase (1.5.5.1)
C12Y 105/07	.	with an iron-sulfur protein as acceptor (1.5.7)
C12Y 105/07001	..	Methylenetetrahydrofolate reductase (ferredoxin) (1.5.7.1)
C12Y 105/08	.	with a flavin as acceptor (1.5.8)
C12Y 105/08001	..	Dimethylamine dehydrogenase (1.5.8.1)
C12Y 105/08002	..	Trimethylamine dehydrogenase (1.5.8.2)
C12Y 105/99	.	with other acceptors ( <a href="#">1.5.99</a> )
C12Y 105/99001	..	Sarcosine dehydrogenase (1.5.99.1)
C12Y 105/99002	..	Dimethylglycine dehydrogenase (1.5.99.2)
C12Y 105/99003	..	L-Pipecolate dehydrogenase (1.5.99.3)
C12Y 105/99004	..	Nicotine dehydrogenase (1.5.99.4)
C12Y 105/99005	..	Methylglutamate dehydrogenase (1.5.99.5)
C12Y 105/99006	..	Spermidine dehydrogenase (1.5.99.6)
C12Y 105/99008	..	Proline dehydrogenase (1.5.99.8)
C12Y 105/99009	..	Methylenetetrahydromethanopterin dehydrogenase (1.5.99.9)

- C12Y 105/99011 . . 5,10-Methylenetetrahydromethanopterin reductase (1.5.99.11)
- C12Y 105/99012 . . Cytokinin dehydrogenase (1.5.99.12)
- C12Y 105/99013 . . D-Proline dehydrogenase (1.5.99.13)

#### **C12Y 106/00      Oxidoreductases acting on NADH or NADPH (1.6)**

- C12Y 106/01 . with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.6.1)
  - C12Y 106/01001 . . NAD(P)<sup>+</sup> transhydrogenase (B-specific) (1.6.1.1)
  - C12Y 106/01002 . . NAD(P)<sup>+</sup> Transhydrogenase (AB-specific) (1.6.1.2)
- C12Y 106/02 . with a heme protein as acceptor (1.6.2)
  - C12Y 106/02002 . . Cytochrome-b5 reductase (1.6.2.2)
  - C12Y 106/02004 . . NADPH-hemoprotein reductase (1.6.2.4), i.e. NADP-cytochrome P450-reductase
  - C12Y 106/02005 . . NADPH--cytochrome-c2 reductase (1.6.2.5)
  - C12Y 106/02006 . . Leghemoglobin reductase (1.6.2.6)
- C12Y 106/03 . with oxygen as acceptor (1.6.3)
  - C12Y 106/03001 . . NAD(P)H oxidase (1.6.3.1), i.e. NOX1
- C12Y 106/05 . with a quinone or similar compound as acceptor (1.6.5)
  - C12Y 106/05002 . . NAD(P)H dehydrogenase (quinone) (1.6.5.2)
  - C12Y 106/05003 . . NADH dehydrogenase (ubiquinone) (1.6.5.3)
  - C12Y 106/05004 . . Monodehydroascorbate reductase (NADH) (1.6.5.4)
  - C12Y 106/05005 . . NADPH:quinone reductase (1.6.5.5)
  - C12Y 106/05006 . . p-Benzoquinone reductase (NADPH) (1.6.5.6)
  - C12Y 106/05007 . . 2-Hydroxy-1,4-benzoquinone reductase (1.6.5.7)
  - C12Y 106/05008 . . NADH:ubiquinone reductase (Na<sup>+</sup>-transporting) (1.6.5.8)
  - C12Y 106/05009 . . NADH:ubiquinone reductase (non-electrogenic) (1.6.5.9)
  - C12Y 106/0501 . . NADPH dehydrogenase (quinone) (1.6.5.10)
- C12Y 106/06 . with a nitrogenous group as acceptor (1.6.6)
  - C12Y 106/06009 . . Trimethylamine-N-oxide reductase (1.6.6.9)
- C12Y 106/99 . with other acceptors (1.6.99)
  - C12Y 106/99001 . . NADPH dehydrogenase (1.6.99.1)
  - C12Y 106/99003 . . NADH dehydrogenase (1.6.99.3)
  - C12Y 106/99005 . . NADH dehydrogenase (quinone) (1.6.99.5)

#### **C12Y 107/00      Oxidoreductases acting on other nitrogenous compounds as donors (1.7)**

- C12Y 107/01 . with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.7.1)
  - C12Y 107/01001 . . Nitrate reductase (NADH) (1.7.1.1)

C12Y 107/01002	.. Nitrate reductase [NAD(P)H] (1.7.1.2)
C12Y 107/01003	.. Nitrate reductase (NADPH) (1.7.1.3)
C12Y 107/01004	.. Nitrite reductase [NAD(P)H] (1.7.1.4)
C12Y 107/01005	.. Hyponitrite reductase (1.7.1.5)
C12Y 107/01006	.. Azobenzene reductase (1.7.1.6)
C12Y 107/01007	.. GMP reductase (1.7.1.7)
C12Y 107/01009	.. Nitroquinoline-N-oxide reductase (1.7.1.9)
C12Y 107/0101	.. Hydroxylamine reductase (NADH) (1.7.1.10)
C12Y 107/01011	.. 4-(Dimethylamino)phenylazoxybenzene reductase (1.7.1.11)
C12Y 107/01012	.. N-Hydroxy-2-acetamidofluorene reductase (1.7.1.12)
C12Y 107/01013	.. PreQ1 synthase (1.7.1.13)
C12Y 107/01014	.. Nitric oxide reductase (NAD(P), nitrous oxide-forming)(1.7.1.14)
C12Y 107/02	. with a cytochrome as acceptor (1.7.2)
C12Y 107/02001	.. Nitrite reductase (NO-forming) (1.7.2.1)
C12Y 107/02002	.. Nitrite reductase (cytochrome; ammonia-forming)(1.7.2.2)
C12Y 107/02003	.. Trimethylamine-N-oxide reductase (cytochrome c)(1.7.2.3)
C12Y 107/02004	.. Nitrous-oxide reductase (1.7.2.4)
C12Y 107/02005	.. Nitric-oxide reductase (cytochrome c)(1.7.2.5)
C12Y 107/03	. with oxygen as acceptor (1.7.3)
C12Y 107/03001	.. Nitroalkane oxidase (1.7.3.1)
C12Y 107/03002	.. Acetylxidoxyl oxidase (1.7.3.2)
C12Y 107/03003	.. Factor-independent urate hydroxylase (1.7.3.3), i.e. uricase
C12Y 107/03004	.. Hydroxylamine oxidase (1.7.3.4)
C12Y 107/03005	.. 3-Aci-nitropropanoate oxidase (1.7.3.5)
C12Y 107/05	. with a quinone or similar compound as acceptor (1.7.5)
C12Y 107/05001	.. Nitrate reductase (quinone) (1.7.5.1)
C12Y 107/05002	.. Nitric oxide reductase (menaquinol) (1.7.5.2)
C12Y 107/06	. with a nitrogenous group as acceptor (1.7.6)
C12Y 107/06001	.. Nitrite dismutase (1.7.6.1)
C12Y 107/07	. with an iron-sulfur protein as acceptor (1.7.7)
C12Y 107/07001	.. Ferredoxin--nitrite reductase (1.7.7.1)
C12Y 107/07002	.. Ferredoxin--nitrate reductase (1.7.7.2)
C12Y 107/99	. with other acceptors (1.7.99)
C12Y 107/99001	.. Hydroxylamine reductase (1.7.99.1)
C12Y 107/99004	.. Nitrate reductase (1.7.99.4)
C12Y 107/99008	.. Hydrazine oxidoreductase (1.7.99.8)

**C12Y 108/00****Oxidoreductases acting on sulfur groups as donors (1.8)**

- C12Y 108/01 . with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.8.1)
- C12Y 108/01002 .. Sulfite reductase (NADPH) (1.8.1.2)
- C12Y 108/01003 .. Hypotaurine dehydrogenase (1.8.1.3)
- C12Y 108/01004 .. Dihydrolipoyl dehydrogenase (1.8.1.4), i.e. lipoamide-dehydrogenase
- C12Y 108/01005 .. 2-Oxopropyl-CoM reductase (carboxylating) (1.8.1.5)
- C12Y 108/01006 .. Cystine reductase (1.8.1.6)
- C12Y 108/01007 .. Glutathione-disulfide reductase (1.8.1.7), i.e. glutathione reductase (NADPH)
- C12Y 108/01008 .. Protein-disulfide reductase (1.8.1.8), i.e. thioredoxin
- C12Y 108/01009 .. Thioredoxin-disulfide reductase (1.8.1.9), i.e. thioredoxin-reductase
- C12Y 108/0101 .. CoA-glutathione reductase (NADPH) (1.8.1.10)
- C12Y 108/01011 .. Asparagusate reductase (1.8.1.11)
- C12Y 108/01012 .. Trypanothione reductase (1.8.1.12)
- C12Y 108/01013 .. Bis-gamma-glutamylcystine reductase (1.8.1.13)
- C12Y 108/01014 .. CoA-disulfide reductase (1.8.1.14)
- C12Y 108/01015 .. Mycothione reductase (1.8.1.15)
- C12Y 108/01016 .. Glutathione amide reductase (1.8.1.16)
- C12Y 108/01017 .. Dimethylsulfone reductase (1.8.1.17)
  
- C12Y 108/02 . with a cytochrome as acceptor (1.8.2)
- C12Y 108/02001 .. Sulfite dehydrogenase (1.8.2.1)
- C12Y 108/02002 .. Thiosulfate dehydrogenase (1.8.2.2)
- C12Y 108/02003 .. Sulfide-cytochrome-c reductase ([flavocytochrome c](#)) (1.8.2.3)
- C12Y 108/02004 .. Dimethyl sulfide:cytochrome c2 reductase (1.8.2.4)
  
- C12Y 108/03 . with oxygen as acceptor (1.8.3)
- C12Y 108/03001 .. Sulfite oxidase (1.8.3.1)
- C12Y 108/03002 .. Thiol oxidase (1.8.3.2)
- C12Y 108/03003 .. Glutathione oxidase (1.8.3.3)
- C12Y 108/03004 .. Methanethiol oxidase (1.8.3.4)
- C12Y 108/03005 .. Prenylcysteine oxidase (1.8.3.5)
- C12Y 108/03006 .. Farnesylcysteine lyase (1.8.3.6)
  
- C12Y 108/04 . with a disulfide as acceptor (1.8.4)
- C12Y 108/04001 .. Glutathione--homocystine transhydrogenase (1.8.4.1)
- C12Y 108/04002 .. Protein-disulfide reductase (glutathione) (1.8.4.2), i.e. BdbC or BdbD
- C12Y 108/04003 .. Glutathione--CoA-glutathione transhydrogenase (1.8.4.3)
- C12Y 108/04004 .. Glutathione--cystine transhydrogenase (1.8.4.4)
- C12Y 108/04005 .. Methionine-S-oxide reductase (1.8.4.5) ([C12Y 108/04013](#) or [C12Y 108/04014](#) takes precedence )

- C12Y 108/04007 .. Enzyme-thiol transhydrogenase (glutathione-disulfide) (1.8.4.7)
- C12Y 108/04008 .. Phosphoadenylyl-sulfate reductase (thioredoxin) (1.8.4.8)
- C12Y 108/04009 .. Adenylyl-sulfate reductase (glutathione) (1.8.4.9)
- C12Y 108/0401 .. Adenylyl-sulfate reductase (thioredoxin) (1.8.4.10)
- C12Y 108/04011 .. Peptide-methionine (S)-S-oxide reductase (1.8.4.11)
- C12Y 108/04012 .. Peptide-methionine (R)-S-oxide reductase (1.8.4.12)
- C12Y 108/04013 .. L-Methionine (S)-S-oxide reductase (1.8.4.13)
- C12Y 108/04014 .. L-Methionine (R)-S-oxide reductase (1.8.4.14)

- C12Y 108/05 .. with a quinone or similar compound as acceptor (1.8.5)
- C12Y 108/05001 .. Glutathione dehydrogenase (ascorbate) (1.8.5.1)
- C12Y 108/05002 .. Thiosulfate dehydrogenase (quinone) (1.8.5.2)
- C12Y 108/05003 .. Dimethylsulfoxide reductase (1.8.5.3)
- C12Y 108/05004 .. Sulfide:quinone reductase (1.8.5.4)

- C12Y 108/07 .. with an iron-sulfur protein as acceptor (1.8.7)
- C12Y 108/07001 .. Sulfite reductase (ferredoxin) (1.8.7.1)
- C12Y 108/07002 .. Ferredoxin:thioredoxin reductase (1.8.7.2)

- C12Y 108/98 .. with other, known, acceptors (1.8.98)
- C12Y 108/98001 .. CoB--CoM heterodisulfide reductase (1.8.98.1)
- C12Y 108/98002 .. Sulfiredoxin (1.8.98.2)

- C12Y 108/99 .. with other acceptors (1.8.99)
- C12Y 108/99001 .. Sulfite reductase (1.8.99.1)
- C12Y 108/99002 .. Adenylyl-sulfate reductase (1.8.99.2)
- C12Y 108/99003 .. Hydrogensulfite reductase (1.8.99.3)

#### **C12Y 109/00      Oxidoreductases acting on a heme group of donors (1.9)**

- C12Y 109/03 .. with oxygen as acceptor (1.9.3)
- C12Y 109/03001 .. Cytochrome-c oxidase (1.9.3.1)
- C12Y 109/06 .. with a nitrogenous group as acceptor (1.9.6)
- C12Y 109/06001 .. Nitrate reductase (cytochrome) (1.9.6.1)
- C12Y 109/99 .. with other acceptors (1.9.99)
- C12Y 109/99001 .. Iron--cytochrome-c reductase (1.9.99.1)

#### **C12Y 110/00      Oxidoreductases acting on diphenols and related substances as donors (1.10)**

- C12Y 110/01 .. with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.10.1)
- C12Y 110/01001 .. Trans-acenaphthene-1,2-diol dehydrogenase (1.10.1.1)

C12Y 110/02	. with a cytochrome as acceptor (1.10.2)
C12Y 110/02001	.. L-Ascorbate--cytochrome-b5 reductase (1.10.2.1)
C12Y 110/02002	.. Ubiquinol-cytochrome-c reductase (1.10.2.2), i.e. electron-transport-complex-III
C12Y 110/03	. with an oxygen as acceptor (1.10.3)
C12Y 110/03001	.. Catechol oxidase (1.10.3.1), i.e. tyrosinase
C12Y 110/03002	.. Laccase (1.10.3.2)
C12Y 110/03003	.. L-ascorbate oxidase (1.10.3.3)
C12Y 110/03004	.. O-aminophenol oxidase (1.10.3.4)
C12Y 110/03005	.. 3-Hydroxyanthranilate oxidase (1.10.3.5)
C12Y 110/03006	.. Rifamycin-B oxidase (1.10.3.6)
C12Y 110/03009	.. Photosystem II (1.10.3.9)
C12Y 110/0301	.. Ubiquinol oxidase (H <sup>+</sup> -transporting) (1.10.3.10)
C12Y 110/03011	.. Ubiquinol oxidase (1.10.3.11)
C12Y 110/03012	.. Menaquinol oxidase (H <sup>+</sup> -transporting) (1.10.3.12)
C12Y 110/09	. with a copper protein as acceptor (1.10.9)
C12Y 110/09001	.. Plastoquinol-plastocyanin reductase (1.10.9.1)
C12Y 110/99	. with other acceptors (1.10.99)
C12Y 110/99002	.. Ribosyldihydronicotinamide dehydrogenase (quinone) (1.10.99.2)
C12Y 110/99003	.. Violaxanthin de-epoxidase (1.10.99.3)

#### **C12Y 111/00      Oxidoreductases acting on a peroxide as acceptor (1.11)**

C12Y 111/01	. Peroxidases (1.11.1)
C12Y 111/01001	.. NADH peroxidase (1.11.1.1)
C12Y 111/01002	.. NADPH peroxidase (1.11.1.2)
C12Y 111/01003	.. Fatty-acid peroxidase (1.11.1.3)
C12Y 111/01005	.. Cytochrome-c peroxidase (1.11.1.5)
C12Y 111/01006	.. Catalase (1.11.1.6)
C12Y 111/01007	.. Peroxidase (1.11.1.7), i.e. horseradish-peroxidase
C12Y 111/01008	.. Iodide peroxidase (1.11.1.8)
C12Y 111/01009	.. Glutathione peroxidase (1.11.1.9)
C12Y 111/0101	.. Chloride peroxidase (1.11.1.10)
C12Y 111/01011	.. L-ascorbate peroxidase (1.11.1.11)
C12Y 111/01012	.. Phospholipid-hydroperoxide glutathione peroxidase (1.11.1.12)
C12Y 111/01013	.. Manganese peroxidase (1.11.1.13)
C12Y 111/01014	.. Lignin peroxidase (1.11.1.14)
C12Y 111/01015	.. Peroxiredoxin (1.11.1.15)
C12Y 111/01016	.. Versatile peroxidase (1.11.1.16)



- C12Y 111/01017 .. Glutathione amide-dependent peroxidase (1.11.1.17)
- C12Y 111/01018 .. Bromide peroxidase (1.11.1.18)
- C12Y 111/01019 .. Dye decolorizing peroxidase (1.11.1.19)
- C12Y 111/0102 .. Prostamide/prostaglandin F2-alpha synthase (1.11.1.20)
- C12Y 111/01021 .. Catalase-peroxidase (1.11.1.21)
- C12Y 111/01802 .. Chloride peroxidase (vanadium-containing) (1.11.1.B2)
- C12Y 111/01806 .. Iodide peroxidase (vanadium-containing) (1.11.1.B6)
- C12Y 111/01807 .. Bromide peroxidase (heme-containing) (1.11.1.B7)
- C12Y 111/01808 .. Bromide peroxidase (metal-containing) (1.11.1.B8)
- C12Y 111/02 .. with H<sub>2</sub>O<sub>2</sub> as acceptor, one oxygen atom of which is incorporated into the product (1.11.2)
- C12Y 111/02001 .. Unspecific peroxygenase (1.11.2.1)
- C12Y 111/02002 .. Myeloperoxidase (1.11.2.2)
- C12Y 111/02003 .. Plant seed peroxygenase (1.11.2.3)
- C12Y 111/02004 .. Fatty-acid peroxygenase (1.11.2.4)

#### **C12Y 112/00      Oxidoreductases acting on hydrogen as donor (1.12)**

- C12Y 112/01 .. with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.12.1)
- C12Y 112/01002 .. Hydrogen dehydrogenase (1.12.1.2)
- C12Y 112/01003 .. Hydrogen dehydrogenase (NADP<sup>+</sup>) (1.12.1.3)
- C12Y 112/01004 .. Hydrogenase (NAD<sup>+</sup>, ferredoxin)(1.12.1.4)
- C12Y 112/02 .. with a cytochrome as acceptor (1.12.2)
- C12Y 112/02001 .. Cytochrome-c3 hydrogenase (1.12.2.1)
- C12Y 112/05 .. with a quinone or similar compound as acceptor (1.12.5)
- C12Y 112/05001 .. Hydrogen:quinone oxidoreductase (1.12.5.1)
- C12Y 112/07 .. with an iron-sulfur protein as acceptor (1.12.7)
- C12Y 112/07002 .. Ferredoxin hydrogenase (1.12.7.2)
- C12Y 112/98 .. with other, known, acceptors (1.12.98)
- C12Y 112/98001 .. Coenzyme F420 hydrogenase (1.12.98.1)
- C12Y 112/98002 .. 5,10-Methenyltetrahydromethanopterin hydrogenase (1.12.98.2)
- C12Y 112/98003 .. Methanosarcina-phenazine hydrogenase (1.12.98.3)
- C12Y 112/99 .. with other acceptors (1.12.99)
- C12Y 112/99006 .. Hydrogenase (acceptor) (1.12.99.6)

#### **C12Y 113/00      Oxidoreductases acting on single donors with incorporation of molecular oxygen (oxygenases) (1.13)**

C12Y 113/11	. with incorporation of two atoms of oxygen (1.13.11)
C12Y 113/11001	.. Catechol 1,2-dioxygenase (1.13.11.1)
C12Y 113/11002	.. Catechol 2,3-dioxygenase (1.13.11.2)
C12Y 113/11003	.. Protocatechuate 3,4-dioxygenase (1.13.11.3)
C12Y 113/11004	.. Gentisate 1,2-dioxygenase (1.13.11.4)
C12Y 113/11005	.. Homogentisate 1,2-dioxygenase (1.13.11.5)
C12Y 113/11006	.. 3-Hydroxyanthranilate 3,4-dioxygenase (1.13.11.6)
C12Y 113/11008	.. Protocatechuate 4,5-dioxygenase (1.13.11.8)
C12Y 113/11009	.. 2,5-Dihydroxypyridine 5,6-dioxygenase (1.13.11.9)
C12Y 113/1101	.. 7,8-Dihydroxykynurenate 8,8a-dioxygenase (1.13.11.10)
C12Y 113/11011	.. Tryptophan 2,3-dioxygenase (1.13.11.11), i.e. indolamine 2,3-dioxygenase 2
C12Y 113/11012	.. Linoleate 13S-lipoxygenase (1.13.11.12)
C12Y 113/11013	.. Ascorbate 2,3-dioxygenase (1.13.11.13)
C12Y 113/11014	.. 2,3-Dihydroxybenzoate 3,4-dioxygenase (1.13.11.14)
C12Y 113/11015	.. 3,4-Dihydroxyphenylacetate 2,3-dioxygenase (1.13.11.15)
C12Y 113/11016	.. 3-Carboxyethylcatechol 2,3-dioxygenase (1.13.11.16)
C12Y 113/11017	.. Indole 2,3-dioxygenase (1.13.11.17)
C12Y 113/11018	.. Sulfur dioxygenase (1.13.11.18)
C12Y 113/11019	.. Cysteamine dioxygenase (1.13.11.19)
C12Y 113/1102	.. Cysteine dioxygenase (1.13.11.20)
C12Y 113/11022	.. Caffate 3,4-dioxygenase (1.13.11.22)
C12Y 113/11023	.. 2,3-Dihydroxyindole 2,3-dioxygenase (1.13.11.23)
C12Y 113/11024	.. Quercetin 2,3-dioxygenase (1.13.11.24)
C12Y 113/11025	.. 3,4-Dihydroxy-9,10-secoandrosta-1,3,5(10)-triene-9,17-dione 4,5-dioxygenase (1.13.11.25)
C12Y 113/11026	.. Peptide-tryptophan 2,3-dioxygenase (1.13.11.26)
C12Y 113/11027	.. 4-Hydroxyphenylpyruvate dioxygenase (1.13.11.27)
C12Y 113/11028	.. 2,3-Dihydroxybenzoate 2,3-dioxygenase (1.13.11.28)
C12Y 113/11029	.. Stizolobate synthase (1.13.11.29)
C12Y 113/1103	.. Stizolobinate synthase (1.13.11.30)
C12Y 113/11031	.. Arachidonate 12-lipoxygenase (1.13.11.31), i.e. lipoxygenase-type-12
C12Y 113/11033	.. Arachidonate 15-lipoxygenase (1.13.11.33)
C12Y 113/11034	.. Arachidonate 5-lipoxygenase (1.13.11.34)
C12Y 113/11035	.. Pyrogallol 1,2-oxygenase (1.13.11.35)
C12Y 113/11036	.. Chloridazon-catechol dioxygenase (1.13.11.36)
C12Y 113/11037	.. Hydroxyquinol 1,2-dioxygenase (1.13.11.37)
C12Y 113/11038	.. 1-Hydroxy-2-naphthoate 1,2-dioxygenase (1.13.11.38)
C12Y 113/11039	.. Biphenyl-2,3-diol 1,2-dioxygenase (1.13.11.39)
C12Y 113/1104	.. Arachidonate 8-lipoxygenase (1.13.11.40)
C12Y 113/11041	.. 2,4'-Dihydroxyacetophenone dioxygenase (1.13.11.41)

C12Y 113/11043	..	Lignostilbene alpha-beta-dioxygenase (1.13.11.43)
C12Y 113/11044	..	Linoleate diol synthase (1.13.11.44) ( <a href="#">C12Y 113/1106</a> , <a href="#">C12Y 504/04006</a> take precedence )
C12Y 113/11045	..	Linoleate 11-lipoxygenase (1.13.11.45)
C12Y 113/11046	..	4-Hydroxymandelate synthase (1.13.11.46)
C12Y 113/11047	..	3-Hydroxy-4-oxoquinoline 2,4-dioxygenase (1.13.11.47)
C12Y 113/11048	..	3-Hydroxy-2-methylquinolin-4-one 2,4-dioxygenase (1.13.11.48)
C12Y 113/11049	..	Chlorite O <sub>2</sub> -lyase (1.13.11.49)
C12Y 113/1105	..	Acetylacetone-cleaving enzyme (1.13.11.50)
C12Y 113/11051	..	9-Cis-epoxycarotenoid dioxygenase (1.13.11.51)
C12Y 113/11052	..	Indoleamine 2,3-dioxygenase (1.13.11.52), i.e. indoleamine 2,3-dioxygenase 1
C12Y 113/11053	..	Acireductone dioxygenase (Ni <sup>2+</sup> -requiring) (1.13.11.53)
C12Y 113/11054	..	Acireductone dioxygenase ( <a href="#">Fe(2+)-requiring</a> )(1.13.11.54)
C12Y 113/11055	..	Sulfur oxygenase/reductase (1.13.11.55)
C12Y 113/11056	..	1,2-Dihydroxynaphthalene dioxygenase (1.13.11.56)
C12Y 113/11057	..	Gallate dioxygenase (1.13.11.57)
C12Y 113/11058	..	Linoleate 9S-lipoxygenase (1.13.11.58)
C12Y 113/11059	..	Torulene dioxygenase (1.13.11.59)
C12Y 113/1106	..	Linoleate 8R-lipoxygenase (1.13.11.60)
C12Y 113/11061	..	Linoleate 9R-lipoxygenase (1.13.11.61)
C12Y 113/11062	..	Linoleate 10R-lipoxygenase (1.13.11.62)
C12Y 113/12	.	with incorporation of one atom of oxygen ( <a href="#">internal monooxygenases or internal mixed function oxidases</a> )(1.13.12)
C12Y 113/12001	..	Arginine 2-monooxygenase (1.13.12.1)
C12Y 113/12002	..	Lysine 2-monooxygenase (1.13.12.2)
C12Y 113/12003	..	Tryptophan 2-monooxygenase (1.13.12.3)
C12Y 113/12004	..	Lactate 2-monooxygenase (1.13.12.4)
C12Y 113/12005	..	Renilla-luciferin 2-monooxygenase (1.13.12.5), i.e. renilla-luciferase
C12Y 113/12006	..	Cypridina-luciferin 2-monooxygenase (1.13.12.6), i.e. cypridina-luciferase
C12Y 113/12007	..	Photinus-luciferin 4-monooxygenase (ATP-hydrolysing) (1.13.12.7), i.e. firefly-luciferase
C12Y 113/12008	..	Watasenia-luciferin 2-monooxygenase (1.13.12.8)
C12Y 113/12009	..	Phenylalanine 2-monooxygenase (1.13.12.9)
C12Y 113/12012	..	Apo-beta-carotenoid-14',13'-dioxygenase (1.13.12.12)
C12Y 113/12013	..	Oplophorus-luciferin 2-monooxygenase (1.13.12.13)
C12Y 113/12015	..	3,4-Dihydroxyphenylalanine oxidative deaminase (1.13.12.15)
C12Y 113/12016	..	Nitronate monooxygenase (1.13.12.16)
C12Y 113/12017	..	Dichloroarcyriaflavin A synthase (1.13.12.17)
C12Y 113/12018	..	Dinoflagellate luciferase (1.13.12.18)
C12Y 113/12019	..	2-Oxoglutarate dioxygenase (ethylene-forming) (1.13.12.19)

C12Y 113/99	. Miscellaneous (1.13.99)
C12Y 113/99001	.. Inositol oxygenase (1.13.99.1), i.e. myo-inositol oxygenase
C12Y 113/99003	.. Tryptophan 2'-dioxygenase (1.13.99.3), i.e. indole-3-alkane-alpha-hydroxylase
<b>C12Y 114/00</b>	<b>Oxidoreductases acting on paired donors, with incorporation or reduction of molecular oxygen (1.14)</b>
C12Y 114/11	. with 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both donors (1.14.11)
C12Y 114/11001	.. Gamma-butyrobetaine dioxygenase (1.14.11.1)
C12Y 114/11002	.. Procollagen-proline dioxygenase (1.14.11.2), i.e. proline-hydroxylase
C12Y 114/11003	.. Pyrimidine-deoxynucleoside 2'-dioxygenase (1.14.11.3)
C12Y 114/11004	.. Procollagen-lysine 5-dioxygenase (1.14.11.4), i.e. lysine-hydroxylase
C12Y 114/11006	.. Thymine dioxygenase (1.14.11.6)
C12Y 114/11007	.. Procollagen-proline 3-dioxygenase (1.14.11.7)
C12Y 114/11008	.. Trimethyllysine dioxygenase (1.14.11.8)
C12Y 114/11009	.. Flavanone 3-dioxygenase (1.14.11.9), i.e. naringenin-3-dioxygenase
C12Y 114/1101	.. Pyrimidine-deoxynucleoside 1'-dioxygenase (1.14.11.10)
C12Y 114/11011	.. Hyoscyamine (6S)-dioxygenase (1.14.11.11)
C12Y 114/11012	.. Gibberellin-44 dioxygenase (1.14.11.12)
C12Y 114/11013	.. Gibberellin 2-beta-dioxygenase (1.14.11.13)
C12Y 114/11014	.. 6-Beta-hydroxyhyoscyamine epoxidase (1.14.11.14)
C12Y 114/11015	.. Gibberellin 3-beta-dioxygenase (1.14.11.15)
C12Y 114/11016	.. Peptide-aspartate beta-dioxygenase (1.14.11.16), i.e. aspartyl (asparaginy) beta-hydroxylase
C12Y 114/11017	.. Taurine dioxygenase (1.14.11.17)
C12Y 114/11018	.. Phytanoyl-CoA dioxygenase (1.14.11.18)
C12Y 114/11019	.. Leucocyanidin oxygenase (1.14.11.19)
C12Y 114/1102	.. Deacetoxyvindoline 4-hydroxylase (1.14.11.20)
C12Y 114/11021	.. Clavamate synthase (1.14.11.21)
C12Y 114/11022	.. Flavone synthase (1.14.11.22)
C12Y 114/11023	.. Flavonol synthase (1.14.11.23)
C12Y 114/11024	.. 2'-Deoxymugineic-acid 2'-dioxygenase (1.14.11.24)
C12Y 114/11025	.. Mugineic-acid 3-dioxygenase (1.14.11.25)
C12Y 114/11026	.. Deacetoxycephalosporin-C hydroxylase (1.14.11.26)
C12Y 114/11027	.. [Histone H3-lysine-36 demethylase (1.14.11.27)
C12Y 114/11028	.. Proline 3-hydroxylase (1.14.11.28)
C12Y 114/11029	.. Hypoxia-inducible factor-proline dioxygenase (1.14.11.29)
C12Y 114/1103	.. Hypoxia-inducible factor-asparagine dioxygenase (1.14.11.30)
C12Y 114/11031	.. Thebaine 6-O-demethylase (1.14.11.31)

C12Y 114/11032	..	Codeine 3-O-demethylase (1.14.11.32)
C12Y 114/11033	..	DNA oxidative demethylase (1.14.11.33)
C12Y 114/11034	..	2-Oxoglutarate/L-arginine monooxygenase/decarboxylase (succinate-forming) (1.14.11.34)
C12Y 114/12	.	with NADH or NADPH as one donor, and incorporation of two atoms of oxygen into one donor (1.14.12)
C12Y 114/12001	..	Anthranilate 1,2-dioxygenase (deaminating, decarboxylating)(1.14.12.1)
C12Y 114/12003	..	Benzene 1,2-dioxygenase (1.14.12.3)
C12Y 114/12004	..	3-Hydroxy-2-methylpyridinecarboxylate dioxygenase (1.14.12.4)
C12Y 114/12005	..	5-Pyridoxate dioxygenase (1.14.12.5)
C12Y 114/12007	..	Phthalate 4,5-dioxygenase (1.14.12.7)
C12Y 114/12008	..	4-Sulfobenzoate 3,4-dioxygenase (1.14.12.8)
C12Y 114/12009	..	4-Chlorophenylacetate 3,4-dioxygenase (1.14.12.9)
C12Y 114/1201	..	Benzoate 1,2-dioxygenase (1.14.12.10)
C12Y 114/12011	..	Toluene dioxygenase (1.14.12.11)
C12Y 114/12012	..	Naphthalene 1,2-dioxygenase (1.14.12.12)
C12Y 114/12013	..	2-Chlorobenzoate 1,2-dioxygenase (1.14.12.13)
C12Y 114/12014	..	2-Aminobenzenesulfonate 2,3-dioxygenase (1.14.12.14)
C12Y 114/12015	..	Terephthalate 1,2-dioxygenase (1.14.12.15)
C12Y 114/12016	..	2-Hydroxyquinoline 5,6-dioxygenase (1.14.12.16)
C12Y 114/12017	..	Nitric oxide dioxygenase (1.14.12.17)
C12Y 114/12018	..	Biphenyl 2,3-dioxygenase (1.14.12.18)
C12Y 114/12019	..	3-Phenylpropanoate dioxygenase (1.14.12.19)
C12Y 114/1202	..	Pheophorbide a oxygenase (1.14.12.20)
C12Y 114/12021	..	Benzoyl-CoA 2,3-dioxygenase (1.14.12.21)
C12Y 114/12022	..	Carbazole 1,9a-dioxygenase (1.14.12.22)
C12Y 114/13	.	with NADH or NADPH as one donor, and incorporation of one atom of oxygen (1.14.13)
C12Y 114/13001	..	Salicylate 1-monooxygenase (1.14.13.1)
C12Y 114/13002	..	4-Hydroxybenzoate 3-monooxygenase (1.14.13.2)
C12Y 114/13004	..	Melilotate 3-monooxygenase (1.14.13.4)
C12Y 114/13005	..	Imidazoleacetate 4-monooxygenase (1.14.13.5)
C12Y 114/13006	..	Orcinol 2-monooxygenase (1.14.13.6)
C12Y 114/13007	..	Phenol 2-monooxygenase (1.14.13.7)
C12Y 114/13008	..	Flavin-containing monooxygenase (1.14.13.8), i.e. dimethylaniline-monooxygenase
C12Y 114/13009	..	Kynurenine 3-monooxygenase (1.14.13.9)
C12Y 114/1301	..	2,6-Dihydroxypyridine 3-monooxygenase (1.14.13.10)
C12Y 114/13011	..	Trans-cinnamate 4-monooxygenase (1.14.13.11)
C12Y 114/13012	..	Benzoate 4-monooxygenase (1.14.13.12)

C12Y 114/13013	..	Calcidiol 1-monooxygenase (1.14.13.13), i.e. 25-hydroxyvitamin D-1-alpha-hydroxylase
C12Y 114/13014	..	Trans-cinnamate 2-monooxygenase (1.14.13.14)
C12Y 114/13015	..	Cholestanetriol 26-monooxygenase (1.14.13.15)
C12Y 114/13016	..	Cyclopentanone monooxygenase (1.14.13.16)
C12Y 114/13017	..	Cholesterol 7-alpha-monooxygenase (1.14.13.17)
C12Y 114/13018	..	4-Hydroxyphenylacetate 1-monooxygenase (1.14.13.18)
C12Y 114/13019	..	Taxifolin 8-monooxygenase (1.14.13.19)
C12Y 114/1302	..	2,4-Dichlorophenol 6-monooxygenase (1.14.13.20)
C12Y 114/13021	..	Flavonoid 3'-monooxygenase (1.14.13.21)
C12Y 114/13022	..	Cyclohexanone monooxygenase (1.14.13.22)
C12Y 114/13023	..	3-Hydroxybenzoate 4-monooxygenase (1.14.13.23)
C12Y 114/13024	..	3-Hydroxybenzoate 6-monooxygenase (1.14.13.24)
C12Y 114/13025	..	Methane monooxygenase (1.14.13.25)
C12Y 114/13026	..	Phosphatidylcholine 12-monooxygenase (1.14.13.26)
C12Y 114/13027	..	4-Aminobenzoate 1-monooxygenase (1.14.13.27)
C12Y 114/13028	..	3,9-Dihydroxypterocarpan 6A-monooxygenase (1.14.13.28)
C12Y 114/13029	..	4-Nitrophenol 2-monooxygenase (1.14.13.29)
C12Y 114/1303	..	Leukotriene-B <sub>4</sub> 20-monooxygenase (1.14.13.30), i.e. leukotriene-B <sub>4</sub> -omega-hydroxylase
C12Y 114/13031	..	2-Nitrophenol 2-monooxygenase (1.14.13.31)
C12Y 114/13032	..	Albendazole monooxygenase (1.14.13.32)
C12Y 114/13033	..	4-Hydroxybenzoate 3-monooxygenase (NAD(P)H)(1.14.13.33)
C12Y 114/13034	..	Leukotriene-E <sub>4</sub> 20-monooxygenase (1.14.13.34)
C12Y 114/13035	..	Anthranilate 3-monooxygenase (deaminating) (1.14.13.35)
C12Y 114/13036	..	5-O-(4-Coumaroyl)-D-quinic acid 3'-monooxygenase (1.14.13.36)
C12Y 114/13037	..	Methyltetrahydroprotoberberine 14-monooxygenase (1.14.13.37)
C12Y 114/13038	..	Anhydrotetracycline monooxygenase (1.14.13.38)
C12Y 114/13039	..	Nitric-oxide synthase (1.14.13.39), i.e. NOS
C12Y 114/1304	..	Anthraniloyl-CoA monooxygenase (1.14.13.40)
C12Y 114/13041	..	Tyrosine N-monooxygenase (1.14.13.41)
C12Y 114/13043	..	Questin monooxygenase (1.14.13.43)
C12Y 114/13044	..	2-Hydroxybiphenyl 3-monooxygenase (1.14.13.44)
C12Y 114/13046	..	(-)-Menthol monooxygenase (1.14.13.46)
C12Y 114/13047	..	(S)-Limonene 3-monooxygenase (1.14.13.47)
C12Y 114/13048	..	(S)-Limonene 6-monooxygenase (1.14.13.48)
C12Y 114/13049	..	(S)-Limonene 7-monooxygenase (1.14.13.49)
C12Y 114/1305	..	Pentachlorophenol monooxygenase (1.14.13.50)
C12Y 114/13051	..	6-Oxocineole dehydrogenase (1.14.13.51)
C12Y 114/13052	..	Isoflavone 3'-hydroxylase (1.14.13.52)



C12Y 114/13053	..	4'-Methoxyisoflavone 2'-hydroxylase (1.14.13.53)
C12Y 114/13054	..	Ketosteroid monooxygenase (1.14.13.54)
C12Y 114/13055	..	Protopine 6-monooxygenase (1.14.13.55)
C12Y 114/13056	..	Dihydrosanguinarine 10-monooxygenase (1.14.13.56)
C12Y 114/13057	..	Dihydrochelirubine 12-monooxygenase (1.14.13.57)
C12Y 114/13058	..	Benzoyl-CoA 3-monooxygenase (1.14.13.58)
C12Y 114/13059	..	L-Lysine 6-monooxygenase (NADPH) (1.14.13.59)
C12Y 114/1306	..	27-Hydroxycholesterol 7-alpha-monooxygenase (1.14.13.60)
C12Y 114/13061	..	2-Hydroxyquinoline 8-monooxygenase (1.14.13.61)
C12Y 114/13062	..	4-Hydroxyquinoline 3-monooxygenase (1.14.13.62)
C12Y 114/13063	..	3-Hydroxyphenylacetate 6-hydroxylase (1.14.13.63)
C12Y 114/13064	..	4-Hydroxybenzoate 1-hydroxylase (1.14.13.64)
C12Y 114/13066	..	2-Hydroxycyclohexanone 2-monooxygenase (1.14.13.66)
C12Y 114/13067	..	Quinine 3-monooxygenase (1.14.13.67)
C12Y 114/13068	..	4-Hydroxyphenylacetaldehyde oxime monooxygenase (1.14.13.68)
C12Y 114/13069	..	Alkene monooxygenase (1.14.13.69)
C12Y 114/1307	..	Sterol 14-demethylase (1.14.13.70)
C12Y 114/13071	..	N-Methylcoclaurine 3'-monooxygenase (1.14.13.71)
C12Y 114/13072	..	Methylsterol monooxygenase (1.14.13.72)
C12Y 114/13073	..	Tabersonine 16-hydroxylase (1.14.13.73)
C12Y 114/13074	..	7-Deoxyloganin 7-hydroxylase (1.14.13.74)
C12Y 114/13075	..	Vinorine hydroxylase (1.14.13.75)
C12Y 114/13076	..	Taxane 10-beta-hydroxylase (1.14.13.76)
C12Y 114/13077	..	Taxane 13-alpha-hydroxylase (1.14.13.77)
C12Y 114/13078	..	Ent-kaurene oxidase (1.14.13.78)
C12Y 114/13079	..	Ent-kaurenoic acid oxidase (1.14.13.79)
C12Y 114/1308	..	(R)-Limonene 6-monooxygenase (1.14.13.80)
C12Y 114/13081	..	Magnesium-protoporphyrin IX monomethyl ester (oxidative) cyclase (1.14.13.81)
C12Y 114/13082	..	Vanillate monooxygenase (1.14.13.82)
C12Y 114/13083	..	Precorrin-3B synthase (1.14.13.83)
C12Y 114/13084	..	4-Hydroxyacetophenone monooxygenase (1.14.13.84)
C12Y 114/13085	..	Glyceollin synthase (1.14.13.85)
C12Y 114/13086	..	2-Hydroxyisoflavanone synthase (1.14.13.86)
C12Y 114/13087	..	Licodione synthase (1.14.13.87)
C12Y 114/13088	..	Flavonoid 3',5'-hydroxylase (1.14.13.88)
C12Y 114/13089	..	Isoflavone 2'-hydroxylase (1.14.13.89)
C12Y 114/1309	..	Zeaxanthin epoxidase (1.14.13.90)
C12Y 114/13091	..	Deoxysarpagine hydroxylase (1.14.13.91)
C12Y 114/13092	..	Phenylacetone monooxygenase (1.14.13.92)
C12Y 114/13093	..	(+)-Absciscic acid 8'-hydroxylase (1.14.13.93)

C12Y 114/13094	..	Lithocholate 6-beta-hydroxylase (1.14.13.94)
C12Y 114/13095	..	7-Alpha-hydroxycholest-4-en-3-one 12-alpha-hydroxylase (1.14.13.95)
C12Y 114/13096	..	5-Beta-cholestane-3-alpha,7-alpha-diol 12-alpha-hydroxylase (1.14.13.96)
C12Y 114/13097	..	Taurochenodeoxycholate 6-alpha-hydroxylase (1.14.13.97)
C12Y 114/13098	..	Cholesterol 24-hydroxylase (1.14.13.98)
C12Y 114/13099	..	24-Hydroxycholesterol 7-alpha-hydroxylase (1.14.13.99)
C12Y 114/131	..	25-Hydroxycholesterol 7-alpha-hydroxylase (1.14.13.100)
C12Y 114/13101	..	Senecionine N-oxygenase (1.14.13.101)
C12Y 114/13102	..	Psoralen synthase (1.14.13.102)
C12Y 114/13103	..	8-Dimethylallylnaringenin 2'-hydroxylase (1.14.13.103)
C12Y 114/13104	..	(+)-Menthofuran synthase (1.14.13.104)
C12Y 114/13105	..	Monocyclic monoterpene ketone monooxygenase (1.14.13.105)
C12Y 114/13106	..	Epi-isozizaene 5-monooxygenase (1.14.13.106)
C12Y 114/13107	..	Limonene 1,2-monooxygenase (1.14.13.107)
C12Y 114/13108	..	Abietadiene hydroxylase (1.14.13.108)
C12Y 114/13109	..	Abietadienol hydroxylase (1.14.13.109)
C12Y 114/1311	..	Geranylgeraniol 18-hydroxylase (1.14.13.110)
C12Y 114/13111	..	Methanesulfonate monooxygenase (1.14.13.111)
C12Y 114/13112	..	3-Epi-6-deoxocathasterone 23-monooxygenase (1.14.13.112)
C12Y 114/13113	..	FAD-dependent urate hydroxylase (1.14.13.113)
C12Y 114/13114	..	6-Hydroxynicotinate 3-monooxygenase (1.14.13.114)
C12Y 114/13115	..	Angelicin synthase (1.14.13.115)
C12Y 114/13116	..	Geranylhdroquinone 3"-hydroxylase (1.14.13.116)
C12Y 114/13117	..	Isoleucine N-monooxygenase (1.14.13.117)
C12Y 114/13118	..	Valine N-monooxygenase (1.14.13.118)
C12Y 114/13119	..	5-Epiaristolochene 1,3-dihydroxylase (1.14.13.119)
C12Y 114/1312	..	Costunolide synthase (1.14.13.120)
C12Y 114/13121	..	Premnaspirodiene oxygenase (1.14.13.121)
C12Y 114/13122	..	Chlorophyllide-a oxygenase (1.14.13.122)
C12Y 114/13123	..	Germacrene A hydroxylase (1.14.13.123)
C12Y 114/13124	..	Phenylalanine N-monooxygenase (1.14.13.124)
C12Y 114/13125	..	Tryptophan N-monooxygenase (1.14.13.125)
C12Y 114/13126	..	Vitamin D3 24-hydroxylase (1.14.13.126)
C12Y 114/13127	..	3-(3-Hydroxy-phenyl)propanoic acid hydroxylase (1.14.13.127)
C12Y 114/13128	..	7-Methylxanthine demethylase (1.14.13.128)
C12Y 114/13129	..	Beta-carotene 3-hydroxylase (1.14.13.129)
C12Y 114/1313	..	Pyrrole-2-carboxylate monooxygenase (1.14.13.130)
C12Y 114/13131	..	Dimethyl-sulfide monooxygenase (1.14.13.131)
C12Y 114/13132	..	Squalene monooxygenase (1.14.13.132)
C12Y 114/13133	..	Pentalenene oxygenase (1.14.13.133)

C12Y 114/13134	..	Beta-amyrin 11-oxidase (1.14.13.134)
C12Y 114/13135	..	1-Hydroxy-2-naphthoate hydroxylase (1.14.13.135)
C12Y 114/13136	..	Isoflavonoid synthase (1.14.13.136)
C12Y 114/1381	..	L-Ornithine N5-monooxygenase (1.14.13.B10)
C12Y 114/14	.	with reduced flavin or flavoprotein as one donor, and incorporation of one atom of oxygen (1.14.14)
C12Y 114/14001	..	Unspecific monooxygenase (1.14.14.1)
C12Y 114/14003	..	Alkanal monooxygenase FMN (1.14.14.3), i.e. bacterial-luciferase
C12Y 114/14005	..	Alkanesulfonate monooxygenase (1.14.14.5)
C12Y 114/14007	..	Tryptophan 7-halogenase (1.14.14.7)
C12Y 114/14008	..	Anthranilate 3-monooxygenase (FAD) (1.14.14.8)
C12Y 114/14009	..	4-Hydroxyphenylacetate 3-monooxygenase (1.14.14.9)
C12Y 114/1401	..	Nitrilotriacetate monooxygenase (1.14.14.10)
C12Y 114/14011	..	Styrene monooxygenase (1.14.14.11)
C12Y 114/14012	..	3-Hydroxy-9,10-seconandrost-1,3,5(10)-triene-9,17-dione monooxygenase (1.14.14.12)
C12Y 114/15	.	with reduced iron-sulfur protein as one donor, and incorporation of one atom of oxygen (1.14.15)
C12Y 114/15001	..	Camphor 5-monooxygenase (1.14.15.1)
C12Y 114/15002	..	Camphor 1,2-monooxygenase (1.14.15.2)
C12Y 114/15003	..	Alkane 1-monooxygenase (1.14.15.3)
C12Y 114/15004	..	Steroid 11-beta-monooxygenase (1.14.15.4)
C12Y 114/15005	..	Corticosterone 18-monooxygenase (1.14.15.5)
C12Y 114/15006	..	Cholesterol monooxygenase (side-chain-cleaving) (1.14.15.6), i.e. cytochrome P450 <sub>scc</sub>
C12Y 114/15007	..	Choline monooxygenase (1.14.15.7)
C12Y 114/15008	..	Steroid 15-beta-monooxygenase (1.14.15.8)
C12Y 114/15802	..	Spheroidene monooxygenase (1.14.15.B2), i.e. acyclic carotenoid 2-ketolase
C12Y 114/16	.	with reduced pteridine as one donor, and incorporation of one atom of oxygen (1.14.16)
C12Y 114/16001	..	Phenylalanine 4-monooxygenase (1.14.16.1)
C12Y 114/16002	..	Tyrosine 3-monooxygenase (1.14.16.2)
C12Y 114/16003	..	Anthranilate 3-monooxygenase (1.14.16.3)
C12Y 114/16004	..	Tryptophan 5-monooxygenase (1.14.16.4)
C12Y 114/16005	..	Alkylglycerol monooxygenase (1.14.16.5)
C12Y 114/16006	..	Mandelate 4-monooxygenase (1.14.16.6)
C12Y 114/17	.	with reduced ascorbate as one donor, and incorporation of one atom of oxygen (1.14.17)
C12Y 114/17001	..	Dopamine beta-monooxygenase (1.14.17.1)

C12Y 114/17003	..	Peptidylglycine monooxygenase (1.14.17.3)
C12Y 114/17004	..	Aminocyclopropanecarboxylate oxidase (1.14.17.4), i.e. ethylene-forming enzyme
C12Y 114/18	.	with another compound as one donor, and incorporation of one atom of oxygen (1.14.18)
C12Y 114/18001	..	Monophenol monooxygenase (1.14.18.1)
C12Y 114/18002	..	CMP-N-acetylneuraminate monooxygenase (1.14.18.2)
C12Y 114/18003	..	Methane monooxygenase (particulate) (1.14.18.3)
C12Y 114/19	.	with oxidation of a pair of donors resulting in the reduction of molecular oxygen to two molecules of water (1.14.19)
C12Y 114/19001	..	Stearoyl-CoA 9-desaturase (1.14.19.1), i.e. DELTA9-desaturase
C12Y 114/19002	..	Acyl-[acyl-carrier-protein] desaturase (1.14.19.2)
C12Y 114/19003	..	Linoleoyl-CoA desaturase (1.14.19.3)
C12Y 114/19004	..	DELTA8-fatty-acid desaturase (1.14.19.4)
C12Y 114/19005	..	DELTA11-fatty-acid desaturase (1.14.19.5)
C12Y 114/19006	..	DELTA12-fatty-acid desaturase (1.14.19.6), i.e. oleoyl-CoA DELTA12 desaturase
C12Y 114/19007	..	(S)-2-Hydroxypropylphosphonic acid epoxidase (1.14.19.7)
C12Y 114/20	.	with 2-oxoglutarate as one donor, and the other dehydrogenated (1.14.20)
C12Y 114/20001	..	Deacetoxycephalosporin-C synthase (1.14.20.1)
C12Y 114/21	.	with NADH or NADPH as one donor, and the other dehydrogenated (1.14.21)
C12Y 114/21001	..	(S)-Stylopine synthase (1.14.21.1)
C12Y 114/21002	..	(S)-Cheilanthifoline synthase (1.14.21.2)
C12Y 114/21003	..	Berbamunine synthase (1.14.21.3)
C12Y 114/21004	..	Salutaridine synthase (1.14.21.4)
C12Y 114/21005	..	(S)-Canadine synthase (1.14.21.5)
C12Y 114/21006	..	Lathosterol oxidase (1.14.21.6), i.e. C-5 sterol desaturase
C12Y 114/21007	..	Biflaviolin synthase (1.14.21.7)
C12Y 114/21008	..	Pseudobaptigenin synthase (1.14.21.8)
C12Y 114/99	.	Miscellaneous (1.14.99)
C12Y 114/99001	..	Prostaglandin-endoperoxide synthase (1.14.99.1), i.e. cyclooxygenase
C12Y 114/99002	..	Kynurenine 7,8-hydroxylase (1.14.99.2)
C12Y 114/99003	..	Heme oxygenase (1.14.99.3)
C12Y 114/99004	..	Progesterone monooxygenase (1.14.99.4)
C12Y 114/99007	..	Squalene monooxygenase (1.14.99.7)
C12Y 114/99009	..	Steroid 17-alpha-monooxygenase (1.14.99.9), i.e. cytochrome-P450-steroid-17-alpha-hydroxylase
C12Y 114/9901	..	Steroid 21-monooxygenase (1.14.99.10), i.e. steroid cytochrome P450 21-hydroxylase
C12Y 114/99011	..	Estradiol 6-beta-monooxygenase (1.14.99.11)

C12Y 114/99012	..	Androst-4-ene-3,17-dione monooxygenase (1.14.99.12)
C12Y 114/99014	..	Progesterone 11-alpha-monooxygenase (1.14.99.14)
C12Y 114/99015	..	4-Methoxybenzoate monooxygenase (O-demethylating) (1.14.99.15)
C12Y 114/99019	..	Plasmanylethanolamine desaturase (1.14.99.19)
C12Y 114/9902	..	Phylloquinone monooxygenase (2,3-epoxidizing) (1.14.99.20)
C12Y 114/99021	..	Latia-luciferin monooxygenase (demethylating) (1.14.99.21), i.e. Latia luciferase
C12Y 114/99022	..	Ecdysone 20-monooxygenase (1.14.99.22)
C12Y 114/99023	..	3-Hydroxybenzoate 2-monooxygenase (1.14.99.23)
C12Y 114/99024	..	Steroid 9-alpha-monooxygenase (1.14.99.24)
C12Y 114/99026	..	2-Hydroxypyridine 5-monooxygenase (1.14.99.26)
C12Y 114/99027	..	Juglone 3-monooxygenase (1.14.99.27)
C12Y 114/99028	..	Linalool 8-monooxygenase (1.14.99.28)
C12Y 114/99029	..	Deoxyhypusine monooxygenase (1.14.99.29)
C12Y 114/99031	..	Myristoyl-CoA 11-(E) desaturase (1.14.99.31)
C12Y 114/99032	..	Myristoyl-CoA 11-(Z) desaturase (1.14.99.32)
C12Y 114/99033	..	DELTA12-fatty acid dehydrogenase (1.14.99.33)
C12Y 114/99034	..	Monoprenyl isoflavone epoxidase (1.14.99.34)
C12Y 114/99035	..	Thiophene-2-carbonyl-CoA monooxygenase (1.14.99.35)
C12Y 114/99036	..	Beta-carotene 15,15'-monooxygenase (1.14.99.36)
C12Y 114/99037	..	Taxadiene 5-alpha-hydroxylase (1.14.99.37)
C12Y 114/99038	..	Cholesterol 25-hydroxylase (1.14.99.38)
C12Y 114/99039	..	Ammonia monooxygenase (1.14.99.39)
C12Y 114/9904	..	5,6-Dimethylbenzimidazole synthase (1.14.99.40)
C12Y 114/99041	..	All-trans-8'-apo-beta-carotenal 15,15'-oxygenase (1.14.99.41)
C12Y 114/99042	..	Zeaxanthin 7,8-dioxygenase (1.14.99.42)
C12Y 114/99043	..	Beta-amyrin 24-hydroxylase (1.14.99.43)
C12Y 114/99044	..	Diapolycopene oxygenase (1.14.99.44)
C12Y 114/99045	..	Carotene epsilon-monooxygenase (1.14.99.45)

#### **C12Y 115/00      Oxidoreductases acting on superoxide as acceptor (1.15)**

C12Y 115/01	.	with NAD or NADP as acceptor (1.15.1)
C12Y 115/01001	..	Superoxide dismutase (1.15.1.1)
C12Y 115/01002	..	Superoxide reductase (1.15.1.2)

#### **C12Y 116/00      Oxidoreductases oxidizing metal ions (1.16)**

C12Y 116/01	.	with NAD <sup>+</sup> or NADP <sup>+</sup> as acceptor (1.16.1)
C12Y 116/01001	..	Mercury(II) reductase (1.16.1.1)
C12Y 116/01002	..	Diferric-transferrin reductase (1.16.1.2)

C12Y 116/01003	..	Aquacobalamin reductase (1.16.1.3)
C12Y 116/01004	..	Cob(II)alamin reductase (1.16.1.4)
C12Y 116/01005	..	Aquacobalamin reductase (NADPH) (1.16.1.5)
C12Y 116/01006	..	Cyanocobalamin reductase (cyanide-eliminating) (1.16.1.6)
C12Y 116/01007	..	Ferric-chelate reductase (NADH) (1.16.1.7)
C12Y 116/01008	..	[Methionine synthase reductase (1.16.1.8)
C12Y 116/01009	..	Ferric-chelate reductase (NADPH) (1.16.1.9)
C12Y 116/03	.	with oxygen as acceptor (1.16.3)
C12Y 116/03001	..	Ferroxidase (1.16.3.1), i.e. ceruloplasmin
C12Y 116/05	.	with a quinone or similar compound as acceptor (1.16.5)
C12Y 116/05001	..	Ascorbate ferrioreductase (transmembrane) (1.16.5.1)
C12Y 116/08	.	with flavin as acceptor (1.16.8)
C12Y 116/08001	..	Cob(II)yrinic acid a,c-diamide reductase (1.16.8.1)
C12Y 116/09	.	with a copper protein as acceptor (1.16.9)
C12Y 116/09001	..	Iron:rusticyanin reductase (1.16.9.1)
C12Y 116/98	.	with other, known, acceptors (1.16.98)
<b>C12Y 117/00</b>		<b>Oxidoreductases acting on CH or CH<sub>2</sub> groups (1.17)</b>
C12Y 117/01	.	with NAD <sup>+</sup> or NADP <sup>+</sup> as acceptor (1.17.1)
C12Y 117/01001	..	CDP-4-dehydro-6-deoxyglucose reductase (1.17.1.1)
C12Y 117/01002	..	4-Hydroxy-3-methylbut-2-enyl diphosphate reductase (1.17.1.2)
C12Y 117/01003	..	Leucoanthocyanidin reductase (1.17.1.3)
C12Y 117/01004	..	Xanthine dehydrogenase (1.17.1.4)
C12Y 117/01005	..	Nicotinate dehydrogenase (1.17.1.5)
C12Y 117/01007	..	3-Oxo-5,6-dehydrosuberil-CoA semialdehyde dehydrogenase (1.17.1.7)
C12Y 117/02	.	with a cytochrome as acceptor (1.17.2)
C12Y 117/02001	..	Nicotinate dehydrogenase (cytochrome) (1.17.2.1)
C12Y 117/03	.	with oxygen as acceptor (1.17.3)
C12Y 117/03001	..	Pteridine oxidase (1.17.3.1)
C12Y 117/03002	..	Xanthine oxidase (1.17.3.2)
C12Y 117/03003	..	6-Hydroxynicotinate dehydrogenase (1.17.3.3)
C12Y 117/04	.	with a disulfide as acceptor (1.17.3)
C12Y 117/04001	..	Ribonucleoside-diphosphate reductase (1.17.4.1)
C12Y 117/04002	..	Ribonucleoside-triphosphate reductase (1.17.4.2)

- C12Y 117/05 . with a quinone or similar compound as acceptor (1.17.5)
- C12Y 117/05001 .. Phenylacetyl-CoA dehydrogenase (1.17.5.1)
- C12Y 117/05002 .. Caffeine dehydrogenase (1.17.5.2)
- C12Y 117/07 . with an iron-sulfur protein as acceptor (1.17.7)
- C12Y 117/07001 .. (E)-4-Hydroxy-3-methylbut-2-enyl-diphosphate synthase (1.17.7.1)
- C12Y 117/07002 .. 7-Hydroxymethyl chlorophyll a reductase (1.17.7.2)
- C12Y 117/99 . with other acceptors (1.17.99)
- C12Y 117/99001 .. 4-Methylphenol dehydrogenase (hydroxylating) (1.17.99.1)
- C12Y 117/99002 .. Ethylbenzene hydroxylase (1.17.99.2)
- C12Y 117/99003 .. 3-Alpha,7-alpha,12-alpha-trihydroxy-5-beta-cholestanoyl-CoA 24-hydroxylase (1.17.99.3)
- C12Y 117/99004 .. Uracil/thymine dehydrogenase (1.17.99.4)
- C12Y 117/99005 .. Bile-acid 7-alpha-dehydroxylase (1.17.99.5)

#### **C12Y 118/00      Oxidoreductases acting on iron-sulfur proteins as donors (1.18)**

- C12Y 118/01 . with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.18.1)
- C12Y 118/01001 .. Rubredoxin--NAD<sup>+</sup> reductase (1.18.1.1)
- C12Y 118/01002 .. Ferredoxin-NADP<sup>+</sup> reductase (1.18.1.2)
- C12Y 118/01003 .. Ferredoxin--NAD<sup>+</sup> reductase (1.18.1.3)
- C12Y 118/01004 .. Rubredoxin--NAD(P)<sup>+</sup> reductase (1.18.1.4)
- C12Y 118/06 . with dinitrogen as acceptor (1.18.6)
- C12Y 118/06001 .. Nitrogenase (1.18.6.1)

#### **C12Y 119/00      Oxidoreductases acting on reduced flavodoxin as donor (1.19)**

- C12Y 119/06 . with dinitrogen as acceptor (1.19.6)
- C12Y 119/06001 .. Nitrogenase (flavodoxin) (1.19.6.1)

#### **C12Y 120/00      Oxidoreductases acting on phosphorus or arsenic in donors (1.20)**

- C12Y 120/01 . with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.20.1)
- C12Y 120/01001 .. Phosphonate dehydrogenase (1.20.1.1)
- C12Y 120/02 . with a cytochrome as acceptor (1.20.2)
- C12Y 120/02001 .. Arsenate reductase ([cytochrome c](#)) (1.20.2.1)
- C12Y 120/04 . acting on phosphorus or arsenic in donors, with disulfide as acceptor (1.20.4)
- C12Y 120/04001 .. Arsenate reductase (1.20.4.1), i.e. glutaredoxin



- C12Y 120/04002 . . Methylarsonate reductase (1.20.4.2)
- C12Y 120/04003 . . Mycoredoxin (1.20.4.3)
- C12Y 120/09 . with a copper protein as acceptor (1.20.9)
- C12Y 120/09001 . . Arsenate reductase (azurin) (1.20.9.1)
- C12Y 120/99 . with other acceptors (1.20.99)
- C12Y 120/99001 . . Arsenate reductase (donor) (1.20.99.1)

### **C12Y 121/00      Oxidoreductases acting on X-H and Y-H to form an X-Y bond (1.21)**

- C12Y 121/03 . with oxygen as acceptor (1.21.3)
- C12Y 121/03001 . . Isopenicillin-N synthase (1.21.3.1)
- C12Y 121/03002 . . Columbamine oxidase (1.21.3.2)
- C12Y 121/03003 . . Reticuline oxidase (1.21.3.3)
- C12Y 121/03004 . . Sulochrin oxidase ((+)-bisdechlorogeodin-forming)(1.21.3.4)
- C12Y 121/03005 . . Sulochrin oxidase ((-)-bisdechlorogeodin-forming)(1.21.3.5)
- C12Y 121/03006 . . Aureusidin synthase (1.21.3.6)
- C12Y 121/04 . with a disulfide as acceptor (1.21.4)
- C12Y 121/04001 . . D-Proline reductase (dithiol) (1.21.4.1)
- C12Y 121/04002 . . Glycine reductase (1.21.4.2)
- C12Y 121/04003 . . Sarcosine reductase (1.21.4.3)
- C12Y 121/04004 . . Betaine reductase (1.21.4.4)
- C12Y 121/99 . with other acceptors (1.21.99)
- C12Y 121/99001 . . Beta-cyclopiazonate dehydrogenase (1.21.99.1)

### **C12Y 122/00      Oxidoreductases acting on halogen in donors (1.22)**

- C12Y 122/01 . with NAD<sup>+</sup> or NADP<sup>+</sup> as acceptor (1.22.1)
- C12Y 122/01001 . . Iodotyrosine deiodinase (1.22.1.1)

### **C12Y 197/00      Other oxidoreductases (1.97)**

- C12Y 197/01 . other oxidoreductases (1.97.1)
- C12Y 197/01001 . . Chlorate reductase (1.97.1.1)
- C12Y 197/01002 . . Pyrogallol hydroxytransferase (1.97.1.2)
- C12Y 197/01003 . . Sulfur reductase (1.97.1.3)
- C12Y 197/01004 . . [Formate-C-acetyltransferase-activating enzyme (1.97.1.4)
- C12Y 197/01008 . . Tetrachloroethene reductive dehalogenase (1.97.1.8)
- C12Y 197/01009 . . Selenate reductase (1.97.1.9)

- C12Y 197/0101 .. Thyroxine 5'-deiodinase (1.97.1.10), i.e. deiodinase I or II
- C12Y 197/01011 .. Thyroxine 5-deiodinase (1.97.1.11), i.e. deiodinase III
- C12Y 197/01012 .. Photosystem I (1.97.1.12)

## **C12Y 201/00      Transferases transferring one-carbon groups (2.1)**

- C12Y 201/01 . Methyltransferases (2.1.1)
- C12Y 201/01001 .. Nicotinamide N-methyltransferase (2.1.1.1)
- C12Y 201/01002 .. Guanidinoacetate N-methyltransferase (2.1.1.2)
- C12Y 201/01003 .. Thetin--homocysteine S-methyltransferase (2.1.1.3)
- C12Y 201/01004 .. Acetylserotonin O-methyltransferase (2.1.1.4)
- C12Y 201/01005 .. Betaine--homocysteine S-methyltransferase (2.1.1.5)
- C12Y 201/01006 .. Catechol O-methyltransferase (2.1.1.6)
- C12Y 201/01007 .. Nicotinate N-methyltransferase (2.1.1.7)
- C12Y 201/01008 .. Histamine N-methyltransferase (2.1.1.8)
- C12Y 201/01009 .. Thiol S-methyltransferase (2.1.1.9)
- C12Y 201/0101 .. Homocysteine S-methyltransferase (2.1.1.10)
- C12Y 201/01011 .. Magnesium protoporphyrin IX methyltransferase (2.1.1.11)
- C12Y 201/01012 .. Methionine S-methyltransferase (2.1.1.12)
- C12Y 201/01013 .. Methionine synthase (2.1.1.13)
- C12Y 201/01014 .. 5-Methyltetrahydropteroyltriglutamate--homocysteine S-methyltransferase (2.1.1.14)
- C12Y 201/01015 .. Fatty-acid O-methyltransferase (2.1.1.15)
- C12Y 201/01016 .. Methylene-fatty-acyl-phospholipid synthase (2.1.1.16)
- C12Y 201/01017 .. Phosphatidylethanolamine N-methyltransferase (2.1.1.17)
- C12Y 201/01018 .. Polysaccharide O-methyltransferase (2.1.1.18)
- C12Y 201/01019 .. Trimethylsulfonium--tetrahydrofolate N-methyltransferase (2.1.1.19)
- C12Y 201/0102 .. Glycine N-methyltransferase (2.1.1.20)
- C12Y 201/01021 .. Methylamine--glutamate N-methyltransferase (2.1.1.21)
- C12Y 201/01022 .. Carnosine N-methyltransferase (2.1.1.22)
- C12Y 201/01023 .. Protein-arginine N-methyltransferase (2.1.1.23)  
([C12Y 201/01124](#) - [C12Y 201/01126](#) take precedence )
- C12Y 201/01024 .. Protein-gamma-glutamate O-methyltransferase (2.1.1.24) ([C12Y 201/01077](#) ,  
[C12Y 201/0108](#) , [C12Y 201/011](#) take precedence )
- C12Y 201/01025 .. Phenol O-methyltransferase (2.1.1.25)
- C12Y 201/01026 .. Iodophenol O-methyltransferase (2.1.1.26)
- C12Y 201/01027 .. Tyramine N-methyltransferase (2.1.1.27)
- C12Y 201/01028 .. Phenylethanolamine N-methyltransferase (2.1.1.28)
- C12Y 201/01029 .. tRNA (cytosine-5-)-methyltransferase (2.1.1.29)  
([C12Y 201/01202](#) - [C12Y 201/01204](#) take precedence )
- C12Y 201/01031 .. tRNA (guanine-N1-)-methyltransferase (2.1.1.31) ([C12Y 201/01221](#) ,  
[C12Y 201/01228](#) take precedence )

C12Y 201/01032	..	tRNA (guanine-N2-)-methyltransferase (2.1.1.32) ( <a href="#">C12Y 201/01213</a> - <a href="#">C12Y 201/01216</a> take precedence )
C12Y 201/01033	..	tRNA (guanine-N7-)-methyltransferase (2.1.1.33)
C12Y 201/01034	..	tRNA (guanosine18-2'-O)-methyltransferase (2.1.1.34)
C12Y 201/01035	..	tRNA (uracil-5-)-methyltransferase (2.1.1.35)
C12Y 201/01036	..	tRNA (adenine-N1-)-methyltransferase (2.1.1.36) ( <a href="#">C12Y 201/01217</a> - <a href="#">C12Y 201/01222</a> take precedence )
C12Y 201/01037	..	DNA (cytosine-5-)-methyltransferase (2.1.1.37)
C12Y 201/01038	..	O-Demethylpuromycin O-methyltransferase (2.1.1.38)
C12Y 201/01039	..	Inositol 3-methyltransferase (2.1.1.39)
C12Y 201/0104	..	Inositol 1-methyltransferase (2.1.1.40)
C12Y 201/01041	..	Sterol 24-C-methyltransferase (2.1.1.41)
C12Y 201/01042	..	Flavone 3'-O-methyltransferase (2.1.1.42)
C12Y 201/01043	..	Histone-lysine N-methyltransferase (2.1.1.43)
C12Y 201/01044	..	Dimethylhistidine N-methyltransferase (2.1.1.44)
C12Y 201/01045	..	Thymidylate synthase (2.1.1.45)
C12Y 201/01046	..	Isoflavone 4'-O-methyltransferase (2.1.1.46)
C12Y 201/01047	..	Indolepyruvate C-methyltransferase (2.1.1.47)
C12Y 201/01048	..	rRNA (adenine-N6-)-methyltransferase (2.1.1.48) ( <a href="#">C12Y 201/01181</a> - <a href="#">C12Y 201/01184</a> take precedence )
C12Y 201/01049	..	Amine N-methyltransferase (2.1.1.49)
C12Y 201/0105	..	Loganate O-methyltransferase (2.1.1.50)
C12Y 201/01051	..	rRNA (guanine-N1-)-methyltransferase (2.1.1.51) ( <a href="#">C12Y 201/01187</a> , <a href="#">C12Y 201/01188</a> take precedence )
C12Y 201/01052	..	rRNA (guanine-N2-)-methyltransferase (2.1.1.52) ( <a href="#">C12Y 201/01171</a> - <a href="#">C12Y 201/01174</a> take precedence )
C12Y 201/01053	..	Putrescine N-methyltransferase (2.1.1.53)
C12Y 201/01054	..	Deoxycytidylate C-methyltransferase (2.1.1.54)
C12Y 201/01055	..	tRNA (adenine-N6-)-methyltransferase (2.1.1.55)
C12Y 201/01056	..	mRNA (guanine-N7-)-methyltransferase (2.1.1.56)
C12Y 201/01057	..	mRNA (nucleoside-2'-O-)-methyltransferase (2.1.1.57)
C12Y 201/01059	..	[Cytochrome c-lysine N-methyltransferase (2.1.1.59)
C12Y 201/0106	..	Calmodulin-lysine N-methyltransferase (2.1.1.60)
C12Y 201/01061	..	tRNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase (2.1.1.61)
C12Y 201/01062	..	mRNA (2'-O-methyladenosine-N6-)-methyltransferase (2.1.1.62)
C12Y 201/01063	..	Methylated-DNA-[protein]-cysteine S-methyltransferase (2.1.1.63), i.e. O6-methylguanine-DNA methyltransferase
C12Y 201/01064	..	3-Demethylubiquinol 3-O-methyltransferase (2.1.1.64)
C12Y 201/01065	..	Licodione 2'-O-methyltransferase (2.1.1.65)
C12Y 201/01066	..	rRNA (adenosine-2'-O-)-methyltransferase (2.1.1.66)
C12Y 201/01067	..	Thiopurine S-methyltransferase (2.1.1.67)
C12Y 201/01068	..	Caffeate O-methyltransferase (2.1.1.68)

C12Y 201/01069	..	5-Hydroxyfuranocoumarin 5-O-methyltransferase (2.1.1.69)
C12Y 201/0107	..	8-Hydroxyfuranocoumarin 8-O-methyltransferase (2.1.1.70)
C12Y 201/01071	..	Phosphatidyl-N-methylethanolamine N-methyltransferase (2.1.1.71)
C12Y 201/01072	..	Site-specific DNA-methyltransferase (adenine-specific) (2.1.1.72)
C12Y 201/01074	..	Methylenetetrahydrofolate--tRNA-(uracil54-C5)-methyltransferase (FADH2-oxidizing) (2.1.1.74)
C12Y 201/01075	..	Apigenin 4'-O-methyltransferase (2.1.1.75)
C12Y 201/01076	..	Quercetin 3-O-methyltransferase (2.1.1.76)
C12Y 201/01077	..	Protein-L-isoaspartate(D-aspartate) O-methyltransferase (2.1.1.77)
C12Y 201/01078	..	Isoorientin 3'-O-methyltransferase (2.1.1.78)
C12Y 201/01079	..	Cyclopropane-fatty-acyl-phospholipid synthase (2.1.1.79)
C12Y 201/0108	..	Protein-glutamate O-methyltransferase (2.1.1.80)
C12Y 201/01082	..	3-Methylquercetin 7-O-methyltransferase (2.1.1.82)
C12Y 201/01083	..	3,7-Dimethylquercetin 4'-O-methyltransferase (2.1.1.83)
C12Y 201/01084	..	Methylquercetagenin 6-O-methyltransferase (2.1.1.84)
C12Y 201/01085	..	Protein-histidine N-methyltransferase (2.1.1.85)
C12Y 201/01086	..	Tetrahydromethanopterin S-methyltransferase (2.1.1.86)
C12Y 201/01087	..	Pyridine N-methyltransferase (2.1.1.87)
C12Y 201/01088	..	8-Hydroxyquercetin 8-O-methyltransferase (2.1.1.88)
C12Y 201/01089	..	Tetrahydrocolumbamine 2-O-methyltransferase (2.1.1.89)
C12Y 201/0109	..	Methanol--5-hydroxybenzimidazolylcobamide Co-methyltransferase (2.1.1.90)
C12Y 201/01091	..	Isobutyraldoxime O-methyltransferase (2.1.1.91)
C12Y 201/01094	..	Tabersonine 16-O-methyltransferase (2.1.1.94)
C12Y 201/01095	..	Tocopherol O-methyltransferase (2.1.1.95)
C12Y 201/01096	..	Thioether S-methyltransferase (2.1.1.96)
C12Y 201/01097	..	3-Hydroxyanthranilate 4-C-methyltransferase (2.1.1.97)
C12Y 201/01098	..	Diphthine synthase (2.1.1.98)
C12Y 201/01099	..	3-Hydroxy-16-methoxy-2,3-dihydrotabersonine N-methyltransferase (2.1.1.99)
C12Y 201/011	..	Protein-S-isoprenylcysteine O-methyltransferase (2.1.1.100)
C12Y 201/01101	..	Macrocin O-methyltransferase (2.1.1.101)
C12Y 201/01102	..	Demethylmacrocin O-methyltransferase (2.1.1.102)
C12Y 201/01103	..	Phosphoethanolamine N-methyltransferase (2.1.1.103)
C12Y 201/01104	..	Caffeoyl-CoA O-methyltransferase (2.1.1.104)
C12Y 201/01105	..	N-Benzoyl-4-hydroxyanthranilate 4-O-methyltransferase (2.1.1.105)
C12Y 201/01106	..	Tryptophan 2-C-methyltransferase (2.1.1.106)
C12Y 201/01107	..	Uroporphyrinogen-III C-methyltransferase (2.1.1.107)
C12Y 201/01108	..	6-Hydroxymellein O-methyltransferase (2.1.1.108)
C12Y 201/01109	..	Demethylsterigmatocystin 6-O-methyltransferase (2.1.1.109)
C12Y 201/0111	..	Sterigmatocystin 8-O-methyltransferase (2.1.1.110)
C12Y 201/01111	..	Anthranilate N-methyltransferase (2.1.1.111)

C12Y 201/01112	..	Glucuronoxylan 4-O-methyltransferase (2.1.1.112)
C12Y 201/01113	..	Site-specific DNA-methyltransferase (cytosine-N4-specific) (2.1.1.113)
C12Y 201/01114	..	Polyprenyldihydroxybenzoate methyltransferase (2.1.1.114)
C12Y 201/01115	..	(RS)-1-Benzyl-1,2,3,4-tetrahydroisoquinoline N-methyltransferase (2.1.1.115)
C12Y 201/01116	..	3'-Hydroxy-N-methyl-(S)-coclaurine 4'-O-methyltransferase (2.1.1.116)
C12Y 201/01117	..	(S)-Scoulerine 9-O-methyltransferase (2.1.1.117)
C12Y 201/01118	..	Columbamine O-methyltransferase (2.1.1.118)
C12Y 201/01119	..	10-Hydroxydihydrosanguinarine 10-O-methyltransferase (2.1.1.119)
C12Y 201/0112	..	12-Hydroxydihydrochelirubine 12-O-methyltransferase (2.1.1.120)
C12Y 201/01121	..	6-O-Methylnorlaudanoline 5'-O-methyltransferase (2.1.1.121)
C12Y 201/01122	..	(S)-Tetrahydroprotoberberine N-methyltransferase (2.1.1.122)
C12Y 201/01123	..	[Cytochrome c-methionine S-methyltransferase (2.1.1.123)
C12Y 201/01124	..	[Cytochrome c-arginine N-methyltransferase (2.1.1.124)
C12Y 201/01125	..	Histone-arginine N-methyltransferase (2.1.1.125)
C12Y 201/01126	..	[Myelin basic protein-arginine N-methyltransferase (2.1.1.126)
C12Y 201/01127	..	[Ribulose-bisphosphate carboxylase-lysine N-methyltransferase (2.1.1.127)
C12Y 201/01128	..	(RS)-Norcoclaurine 6-O-methyltransferase (2.1.1.128)
C12Y 201/01129	..	Inositol 4-methyltransferase (2.1.1.129)
C12Y 201/0113	..	Pecorin-2 C20-methyltransferase (2.1.1.130)
C12Y 201/01131	..	Pecorin-3B C17-methyltransferase (2.1.1.131)
C12Y 201/01132	..	Pecorin-6Y C5,15-methyltransferase (decarboxylating) (2.1.1.132)
C12Y 201/01133	..	Pecorin-4 C11-methyltransferase (2.1.1.133)
C12Y 201/01136	..	Chlorophenol O-methyltransferase (2.1.1.136)
C12Y 201/01137	..	Arsenite methyltransferase (2.1.1.137)
C12Y 201/01139	..	3'-Demethylstaurosporine O-methyltransferase (2.1.1.139)
C12Y 201/0114	..	(S)-Coclaurine-N-methyltransferase (2.1.1.140)
C12Y 201/01141	..	Jasmonate O-methyltransferase (2.1.1.141)
C12Y 201/01142	..	Cycloartenol 24-C-methyltransferase (2.1.1.142), i.e. sterol C24-methyltransferase
C12Y 201/01143	..	24-Methylenesterol C-methyltransferase (2.1.1.143), i.e. DELTA24-sterol methyltransferase
C12Y 201/01144	..	Trans-aconitate 2-methyltransferase (2.1.1.144)
C12Y 201/01145	..	Trans-aconitate 3-methyltransferase (2.1.1.145)
C12Y 201/01146	..	(Iso)eugenol O-methyltransferase (2.1.1.146)
C12Y 201/01147	..	Corydaline synthase (2.1.1.147)
C12Y 201/01148	..	Thymidylate synthase (FAD) (2.1.1.148)
C12Y 201/01149	..	Myricetin O-methyltransferase (2.1.1.149)
C12Y 201/0115	..	Isoflavone 7-O-methyltransferase (2.1.1.150)
C12Y 201/01151	..	Cobalt-factor II C20-methyltransferase (2.1.1.151)
C12Y 201/01152	..	Pecorin-6A synthase (deacetylating) (2.1.1.152)
C12Y 201/01153	..	Vitexin 2''-O-rhamnoside 7-O-methyltransferase (2.1.1.153)

C12Y 201/01154	..	Isoliquiritigenin 2'-O-methyltransferase (2.1.1.154)
C12Y 201/01155	..	Kaempferol 4'-O-methyltransferase (2.1.1.155)
C12Y 201/01156	..	Glycine/sarcosine N-methyltransferase (2.1.1.156)
C12Y 201/01157	..	Sarcosine/dimethylglycine N-methyltransferase (2.1.1.157)
C12Y 201/01158	..	7-Methylxanthosine synthase (2.1.1.158)
C12Y 201/01159	..	Theobromine synthase (2.1.1.159)
C12Y 201/0116	..	Caffeine synthase (2.1.1.160)
C12Y 201/01161	..	Dimethylglycine N-methyltransferase (2.1.1.161)
C12Y 201/01162	..	Glycine/sarcosine/dimethylglycine N-methyltransferase (2.1.1.162)
C12Y 201/01163	..	Demethylmenaquinone methyltransferase (2.1.1.163)
C12Y 201/01164	..	Demethylrebeccamycin-D-glucose O-methyltransferase (2.1.1.164)
C12Y 201/01165	..	Methyl halide transferase (2.1.1.165)
C12Y 201/01166	..	23S rRNA (uridine2552-2'-O-)-methyltransferase (2.1.1.166)
C12Y 201/01167	..	27S pre-rRNA (guanosine2922-2'-O-)-methyltransferase (2.1.1.167)
C12Y 201/01168	..	21S rRNA (uridine2791-2'-O-)-methyltransferase (2.1.1.168)
C12Y 201/01169	..	Tricetin 3',4',5'-O-trimethyltransferase (2.1.1.169)
C12Y 201/0117	..	16S rRNA (guanine527-N7)-methyltransferase (2.1.1.170)
C12Y 201/01171	..	16S rRNA (guanine966-N2)-methyltransferase (2.1.1.171)
C12Y 201/01172	..	16S rRNA (guanine1207-N2)-methyltransferase (2.1.1.172)
C12Y 201/01173	..	23S rRNA (guanine2445-N2)-methyltransferase (2.1.1.173)
C12Y 201/01174	..	23S rRNA (guanine1835-N2)-methyltransferase (2.1.1.174)
C12Y 201/01175	..	Tricin synthase (2.1.1.175)
C12Y 201/01176	..	16S rRNA (cytosine967-C5)-methyltransferase (2.1.1.176)
C12Y 201/01177	..	23S rRNA (pseudouridine1915-N3)-methyltransferase (2.1.1.177)
C12Y 201/01178	..	16S rRNA (cytosine1407-C5)-methyltransferase (2.1.1.178)
C12Y 201/01179	..	16S rRNA (guanine1405-N7)-methyltransferase (2.1.1.179)
C12Y 201/0118	..	16S rRNA (adenine1408-N1)-methyltransferase (2.1.1.180)
C12Y 201/01181	..	23S rRNA (adenine1618-N6)-methyltransferase (2.1.1.181)
C12Y 201/01182	..	16S rRNA (adenine1518-N6/adenine1519-N6)-dimethyltransferase (2.1.1.182)
C12Y 201/01183	..	18S rRNA (adenine1779-N6/adenine1780-N6)-dimethyltransferase (2.1.1.183)
C12Y 201/01184	..	23S rRNA (adenine2085-N6)-dimethyltransferase (2.1.1.184)
C12Y 201/01185	..	23S rRNA (guanine2251-2'-O)-methyltransferase (2.1.1.185)
C12Y 201/01186	..	23S rRNA (cytidine2498-2'-O)-methyltransferase (2.1.1.186)
C12Y 201/01187	..	23S rRNA (guanine745-N1)-methyltransferase (2.1.1.187)
C12Y 201/01188	..	23S rRNA (guanine748-N1)-methyltransferase (2.1.1.188)
C12Y 201/01189	..	23S rRNA (uracil747-C5)-methyltransferase (2.1.1.189)
C12Y 201/0119	..	23S rRNA (uracil1939-C5)-methyltransferase (2.1.1.190)
C12Y 201/01191	..	23S rRNA (cytosine1962-C5)-methyltransferase (2.1.1.191)
C12Y 201/01192	..	23S rRNA (adenine2503-C2)-methyltransferase (2.1.1.192)
C12Y 201/01193	..	16S rRNA (uracil1498-N3)-methyltransferase (2.1.1.193)



<a href="#">C12Y 201/01194</a>	..	23S rRNA (adenine2503-C2,C8)-dimethyltransferase (2.1.1.194) ( <a href="#">C12Y 201/01192</a> , <a href="#">C12Y 201/01224</a> take precedence )
<a href="#">C12Y 201/01195</a>	..	Cobalt-precorrin-5B (C1)-methyltransferase (2.1.1.195)
<a href="#">C12Y 201/01196</a>	..	Cobalt-precorrin-7 (C15)-methyltransferase (decarboxylating) (2.1.1.196)
<a href="#">C12Y 201/01197</a>	..	Malonyl-CoA O-methyltransferase (2.1.1.197)
<a href="#">C12Y 201/01198</a>	..	16S rRNA (cytidine1402-2'-O)-methyltransferase (2.1.1.198)
<a href="#">C12Y 201/01199</a>	..	16S rRNA (cytosine1402-N4)-methyltransferase (2.1.1.199)
<a href="#">C12Y 201/012</a>	..	tRNA (cytidine32/uridine32-2'-O)-methyltransferase (2.1.1.200)
<a href="#">C12Y 201/01201</a>	..	2-Methoxy-6-polyprenyl-1,4-benzoquinol methylase (2.1.1.201)
<a href="#">C12Y 201/01202</a>	..	Multisite-specific tRNA:(cytosine-C5)-methyltransferase (2.1.1.202)
<a href="#">C12Y 201/01203</a>	..	tRNA (cytosine34-C5)-methyltransferase (2.1.1.203)
<a href="#">C12Y 201/01204</a>	..	tRNA (cytosine38-C5)-methyltransferase (2.1.1.204)
<a href="#">C12Y 201/01205</a>	..	tRNA (cytidine32/guanosine34-2'-O)-methyltransferase (2.1.1.205)
<a href="#">C12Y 201/01206</a>	..	tRNA (cytidine56-2'-O)-methyltransferase (2.1.1.206)
<a href="#">C12Y 201/01207</a>	..	tRNA (cytidine34-2'-O)-methyltransferase (2.1.1.207)
<a href="#">C12Y 201/01208</a>	..	23S rRNA (uridine2479-2'-O)-methyltransferase (2.1.1.208)
<a href="#">C12Y 201/01209</a>	..	23S rRNA (guanine2535-N1)-methyltransferase (2.1.1.209)
<a href="#">C12Y 201/0121</a>	..	Demethylspheroidene O-methyltransferase (2.1.1.210)
<a href="#">C12Y 201/01211</a>	..	tRNA(Ser) (uridine44-2'-O)-methyltransferase (2.1.1.211)
<a href="#">C12Y 201/01212</a>	..	2,7,4'-Trihydroxyisoflavanone 4'-O-methyltransferase (2.1.1.212)
<a href="#">C12Y 201/01213</a>	..	tRNA (guanine10-N2)-dimethyltransferase (2.1.1.213)
<a href="#">C12Y 201/01214</a>	..	tRNA (guanine10-N2)-methyltransferase (2.1.1.214)
<a href="#">C12Y 201/01215</a>	..	tRNA (guanine26-N2/guanine27-N2)-dimethyltransferase (2.1.1.215)
<a href="#">C12Y 201/01216</a>	..	tRNA (guanine26-N2)-dimethyltransferase (2.1.1.216)
<a href="#">C12Y 201/01217</a>	..	tRNA (adenine22-N1)-methyltransferase (2.1.1.217)
<a href="#">C12Y 201/01218</a>	..	tRNA (adenine9-N1)-methyltransferase (2.1.1.218)
<a href="#">C12Y 201/01219</a>	..	tRNA (adenine57-N1/adenine58-N1)-methyltransferase (2.1.1.219)
<a href="#">C12Y 201/0122</a>	..	tRNA (adenine58-N1)-methyltransferase (2.1.1.220)
<a href="#">C12Y 201/01221</a>	..	tRNA (guanine9-N1)-methyltransferase (2.1.1.221)
<a href="#">C12Y 201/01222</a>	..	2-Polyprenyl-6-hydroxyphenyl methylase (2.1.1.222)
<a href="#">C12Y 201/01223</a>	..	tRNA1(Val) (adenine37-N6)-methyltransferase (2.1.1.223)
<a href="#">C12Y 201/01224</a>	..	23S rRNA (adenine2503-C8)-methyltransferase (2.1.1.224)
<a href="#">C12Y 201/01225</a>	..	tRNA:m4X modification enzyme (2.1.1.225)
<a href="#">C12Y 201/01226</a>	..	23S rRNA (cytidine1920-2'-O)-methyltransferase (2.1.1.226)
<a href="#">C12Y 201/01227</a>	..	16S rRNA (cytidine1409-2'-O)-methyltransferase (2.1.1.227)
<a href="#">C12Y 201/01228</a>	..	tRNA (guanine37-N1)-methyltransferase (2.1.1.228)
<a href="#">C12Y 201/01229</a>	..	tRNA (carboxymethyluridine34-5-O)-methyltransferase (2.1.1.229)
<a href="#">C12Y 201/0123</a>	..	23S rRNA (adenosine1067-2'-O)-methyltransferase (2.1.1.230)
<a href="#">C12Y 201/01231</a>	..	Flavonoid 4'-O-methyltransferase (2.1.1.231)
<a href="#">C12Y 201/01232</a>	..	Naringenin 7-O-methyltransferase (2.1.1.232)



C12Y 201/01233	..	[Phosphatase 2A protein-leucine-carboxy methyltransferase (2.1.1.233)
C12Y 201/01234	..	dTDP-3-amino-3,4,6-trideoxy-alpha-D-glucopyranose N,N-dimethyltransferase (2.1.1.234)
C12Y 201/01235	..	dTDP-3-amino-3,6-dideoxy-alpha-D-glucopyranose N,N-dimethyltransferase (2.1.1.235)
C12Y 201/01236	..	dTDP-3-amino-3,6-dideoxy-alpha-D-galactopyranose N,N-dimethyltransferase (2.1.1.236)
C12Y 201/01237	..	Mycinamicin III 3"-O-methyltransferase (2.1.1.237)
C12Y 201/01238	..	Mycinamicin VI 2"-O-methyltransferase (2.1.1.238)
C12Y 201/02	.	Hydroxymethyl-, formyl- and related transferases (2.1.2)
C12Y 201/02001	..	Glycine hydroxymethyltransferase (2.1.2.1)
C12Y 201/02002	..	Phosphoribosylglycinamide formyltransferase (2.1.2.2)
C12Y 201/02003	..	Phosphoribosylaminoimidazolecarboxamide formyltransferase (2.1.2.3), i.e. AICAR formyltransferase
C12Y 201/02004	..	Glycine formimidoyltransferase (2.1.2.4)
C12Y 201/02005	..	Glutamate formimidoyltransferase (2.1.2.5)
C12Y 201/02007	..	D-Alanine 2-hydroxymethyltransferase (2.1.2.7)
C12Y 201/02008	..	Deoxycytidylate 5-hydroxymethyltransferase (2.1.2.8)
C12Y 201/02009	..	Methionyl-tRNA formyltransferase (2.1.2.9)
C12Y 201/0201	..	Aminomethyltransferase (2.1.2.10)
C12Y 201/02011	..	3-Methyl-2-oxobutanoate hydroxymethyltransferase (2.1.2.11), i.e. ketopantoate hydroxymethyltransferase
C12Y 201/02013	..	UDP-4-amino-4-deoxy-L-arabinose formyltransferase (2.1.2.13)
C12Y 201/03	.	Carboxy- and carbamoyltransferases (2.1.3)
C12Y 201/03001	..	Methylmalonyl-CoA carboxytransferase (2.1.3.1)
C12Y 201/03002	..	Aspartate carbamoyltransferase (2.1.3.2)
C12Y 201/03003	..	Ornithine carbamoyltransferase (2.1.3.3)
C12Y 201/03005	..	Oxamate carbamoyltransferase (2.1.3.5)
C12Y 201/03006	..	Putrescine carbamoyltransferase (2.1.3.6)
C12Y 201/03007	..	3-Hydroxymethylcephem carbamoyltransferase (2.1.3.7)
C12Y 201/03008	..	Lysine carbamoyltransferase (2.1.3.8)
C12Y 201/03009	..	N-Acetylornithine carbamoyltransferase (2.1.3.9)
C12Y 201/0301	..	Malonyl-S-ACP:biotin-protein carboxyltransferase (2.1.3.10)
C12Y 201/03011	..	N-Succinylornithine carbamoyltransferase (2.1.3.11)
C12Y 201/04	.	Amidinotransferases (2.1.4)
C12Y 201/04001	..	Glycine amidinotransferase (2.1.4.1)
C12Y 201/04002	..	Scyllo-inosamine-4-phosphate amidinotransferase (2.1.4.2)
C12Y 202/00		<b>Transferases transferring aldehyde or ketonic groups (2.2)</b>

- C12Y 202/01 . Transketolases and transaldolases (2.2.1)
- C12Y 202/01001 .. Transketolase (2.2.1.1)
- C12Y 202/01002 .. Transaldolase (2.2.1.2)
- C12Y 202/01003 .. Formaldehyde transketolase (2.2.1.3)
- C12Y 202/01004 .. Acetoin--ribose-5-phosphate transaldolase (2.2.1.4)
- C12Y 202/01005 .. 2-Hydroxy-3-oxoadipate synthase (2.2.1.5)
- C12Y 202/01006 .. Acetolactate synthase (2.2.1.6)
- C12Y 202/01007 .. 1-Deoxy-D-xylulose-5-phosphate synthase (2.2.1.7)
- C12Y 202/01008 .. Fluorothreonine transaldolase (2.2.1.8)
- C12Y 202/01009 .. 2-Succinyl-5-enolpyruvyl-6-hydroxy-3-cyclohexene-1-carboxylic-acid synthase (2.2.1.9)

### **C12Y 203/00 Acyltransferases (2.3)**

- C12Y 203/01 . transferring groups other than amino-acyl groups (2.3.1)
- C12Y 203/01001 .. Amino-acid N-acetyltransferase (2.3.1.1)
- C12Y 203/01002 .. Imidazole N-acetyltransferase (2.3.1.2)
- C12Y 203/01003 .. Glucosamine N-acetyltransferase (2.3.1.3)
- C12Y 203/01004 .. Glucosamine-phosphate N-acetyltransferase (2.3.1.4)
- C12Y 203/01005 .. Arylamine N-acetyltransferase (2.3.1.5)
- C12Y 203/01006 .. Choline O-acetyltransferase (2.3.1.6)
- C12Y 203/01007 .. Carnitine O-acetyltransferase (2.3.1.7)
- C12Y 203/01008 .. Phosphate acetyltransferase (2.3.1.8)
- C12Y 203/01009 .. Acetyl-CoA C-acetyltransferase (2.3.1.9)
- C12Y 203/0101 .. Hydrogen-sulfide S-acetyltransferase (2.3.1.10)
- C12Y 203/01011 .. Thioethanolamine S-acetyltransferase (2.3.1.11)
- C12Y 203/01012 .. Dihydrolipoylysine-residue acetyltransferase (2.3.1.12)
- C12Y 203/01013 .. Glycine N-acyltransferase (2.3.1.13)
- C12Y 203/01014 .. Glutamine N-phenylacetyltransferase (2.3.1.14)
- C12Y 203/01015 .. Glycerol-3-phosphate O-acyltransferase (2.3.1.15)
- C12Y 203/01016 .. Acetyl-CoA C-acyltransferase (2.3.1.16)
- C12Y 203/01017 .. Aspartate N-acetyltransferase (2.3.1.17)
- C12Y 203/01018 .. Galactoside O-acetyltransferase (2.3.1.18)
- C12Y 203/01019 .. Phosphate butyryltransferase (2.3.1.19)
- C12Y 203/0102 .. Diacylglycerol O-acyltransferase (2.3.1.20)
- C12Y 203/01021 .. Carnitine O-palmitoyltransferase (2.3.1.21)
- C12Y 203/01022 .. 2-Acylglycerol O-acyltransferase (2.3.1.22)
- C12Y 203/01023 .. 1-Acylglycerophosphocholine O-acyltransferase (2.3.1.23), i.e. lysophosphatidylcholine acyltransferase or LPCAT
- C12Y 203/01024 .. Sphingosine N-acyltransferase (2.3.1.24)

C12Y 203/01025	..	Plasmalogen synthase (2.3.1.25)
C12Y 203/01026	..	Sterol O-acyltransferase (2.3.1.26)
C12Y 203/01027	..	Cortisol O-acetyltransferase (2.3.1.27)
C12Y 203/01028	..	Chloramphenicol O-acetyltransferase (2.3.1.28)
C12Y 203/01029	..	Glycine C-acetyltransferase (2.3.1.29)
C12Y 203/0103	..	Serine O-acetyltransferase (2.3.1.30)
C12Y 203/01031	..	Homoserine O-acetyltransferase (2.3.1.31)
C12Y 203/01032	..	Lysine N-acetyltransferase (2.3.1.32)
C12Y 203/01033	..	Histidine N-acetyltransferase (2.3.1.33)
C12Y 203/01034	..	D-Tryptophan N-acetyltransferase (2.3.1.34)
C12Y 203/01035	..	Glutamate N-acetyltransferase (2.3.1.35)
C12Y 203/01036	..	D-Amino-acid N-acetyltransferase (2.3.1.36)
C12Y 203/01037	..	5-Aminolevulinate synthase (2.3.1.37)
C12Y 203/01038	..	[Acyl-carrier-protein S-acetyltransferase (2.3.1.38)
C12Y 203/01039	..	[Acyl-carrier-protein] S-malonyltransferase (2.3.1.39)
C12Y 203/0104	..	Acyl-[acyl-carrier-protein--phospholipid O-acyltransferase (2.3.1.40)
C12Y 203/01041	..	Beta-ketoacyl-acyl-carrier-protein synthase I (2.3.1.41)
C12Y 203/01042	..	Glycerone-phosphate O-acyltransferase (2.3.1.42)
C12Y 203/01043	..	Phosphatidylcholine-sterol O-acyltransferase (2.3.1.43), i.e. lecithin-cholesterol acyltransferase or LCAT
C12Y 203/01044	..	Acetyl-CoA:N-acetylneuraminate 4-O-acetyltransferase (2.3.1.44)
C12Y 203/01045	..	N-Acetylneuraminate 7-O (or 9-O)-acetyltransferase (2.3.1.45)
C12Y 203/01046	..	Homoserine O-succinyltransferase (2.3.1.46)
C12Y 203/01047	..	8-Amino-7-oxononanoate synthase (2.3.1.47)
C12Y 203/01048	..	Histone acetyltransferase (2.3.1.48)
C12Y 203/01049	..	Deacetyl-[citrate-(pro-3S)-lyase S-acetyltransferase (2.3.1.49)
C12Y 203/0105	..	Serine C-palmitoyltransferase (2.3.1.50)
C12Y 203/01051	..	1-Acylglycerol-3-phosphate O-acyltransferase (2.3.1.51)
C12Y 203/01052	..	2-Acylglycerol-3-phosphate O-acyltransferase (2.3.1.52)
C12Y 203/01053	..	Phenylalanine N-acetyltransferase (2.3.1.53)
C12Y 203/01054	..	Formate C-acetyltransferase (2.3.1.54), i.e. pyruvate formate-lyase or PFL
C12Y 203/01056	..	Aromatic-hydroxylamine O-acetyltransferase (2.3.1.56)
C12Y 203/01057	..	Diamine N-acetyltransferase (2.3.1.57)
C12Y 203/01058	..	2,3-Diaminopropionate N-oxalyltransferase (2.3.1.58)
C12Y 203/01059	..	Gentamicin 2'-N-acetyltransferase (2.3.1.59)
C12Y 203/0106	..	Gentamicin 3'-N-acetyltransferase (2.3.1.60)
C12Y 203/01061	..	Dihydrolipoyllysine-residue succinyltransferase (2.3.1.61)
C12Y 203/01062	..	2-Acylglycerophosphocholine O-acyltransferase (2.3.1.62)
C12Y 203/01063	..	1-Alkylglycerophosphocholine O-acyltransferase (2.3.1.63)
C12Y 203/01064	..	Agmatine N4-coumaroyltransferase (2.3.1.64)

C12Y 203/01065	..	Bile acid-CoA:amino acid N-acyltransferase (2.3.1.65)
C12Y 203/01066	..	Leucine N-acetyltransferase (2.3.1.66)
C12Y 203/01067	..	1-Alkylglycerophosphocholine O-acetyltransferase (2.3.1.67)
C12Y 203/01068	..	Glutamine N-acyltransferase (2.3.1.68)
C12Y 203/01069	..	Monoterpenol O-acetyltransferase (2.3.1.69)
C12Y 203/01071	..	Glycine N-benzoyltransferase (2.3.1.71)
C12Y 203/01072	..	Indoleacetylglucose--inositol O-acyltransferase (2.3.1.72)
C12Y 203/01073	..	Diacylglycerol-sterol O-acyltransferase (2.3.1.73)
C12Y 203/01074	..	Naringenin-chalcone synthase (2.3.1.74), i.e. chalcone synthase
C12Y 203/01075	..	Long-chain-alcohol O-fatty-acyltransferase (2.3.1.75)
C12Y 203/01076	..	Retinol O-fatty-acyltransferase (2.3.1.76)
C12Y 203/01077	..	Triacylglycerol--sterol O-acyltransferase (2.3.1.77)
C12Y 203/01078	..	Heparan-alpha-glucosaminide N-acetyltransferase (2.3.1.78)
C12Y 203/01079	..	Maltose O-acetyltransferase (2.3.1.79)
C12Y 203/0108	..	Cysteine-S-conjugate N-acetyltransferase (2.3.1.80)
C12Y 203/01081	..	Aminoglycoside N3'-acetyltransferase (2.3.1.81)
C12Y 203/01082	..	Aminoglycoside N6'-acetyltransferase (2.3.1.82)
C12Y 203/01083	..	Phosphatidylcholine--dolichol O-acyltransferase (2.3.1.83)
C12Y 203/01084	..	Alcohol O-acetyltransferase (2.3.1.84)
C12Y 203/01085	..	Fatty-acid synthase (2.3.1.85)
C12Y 203/01086	..	Fatty-acyl-CoA synthase (2.3.1.86)
C12Y 203/01087	..	Aralkylamine N-acetyltransferase (2.3.1.87)
C12Y 203/01088	..	Peptide alpha-N-acetyltransferase (2.3.1.88)
C12Y 203/01089	..	Tetrahydrodipicolinate N-acetyltransferase (2.3.1.89)
C12Y 203/0109	..	Beta-glucogallin O-galloyltransferase (2.3.1.90)
C12Y 203/01091	..	Sinapoylglucose--choline O-sinapoyltransferase (2.3.1.91)
C12Y 203/01092	..	Sinapoylglucose--malate O-sinapoyltransferase (2.3.1.92)
C12Y 203/01093	..	13-Hydroxylupanine O-tigloyltransferase (2.3.1.93)
C12Y 203/01094	..	6-Deoxyerythronolide-B synthase (2.3.1.94)
C12Y 203/01095	..	Trihydroxystilbene synthase (2.3.1.95)
C12Y 203/01096	..	Glycoprotein N-palmitoyltransferase (2.3.1.96)
C12Y 203/01097	..	Glycylpeptide N-tetradecanoyltransferase (2.3.1.97)
C12Y 203/01098	..	Chlorogenate--glucarate O-hydroxycinnamoyltransferase (2.3.1.98)
C12Y 203/01099	..	Quinate O-hydroxycinnamoyltransferase (2.3.1.99)
C12Y 203/011	..	[Myelin-proteolipid O-palmitoyltransferase (2.3.1.100)
C12Y 203/01101	..	Formylmethanofuran--tetrahydromethanopterin N-formyltransferase (2.3.1.101)
C12Y 203/01102	..	N6-Hydroxylysine O-acetyltransferase (2.3.1.102)
C12Y 203/01103	..	Sinapoylglucose--sinapoylglucose O-sinapoyltransferase (2.3.1.103)
C12Y 203/01104	..	1-Alkenylglycerophosphocholine O-acyltransferase (2.3.1.104)
C12Y 203/01105	..	Alkylglycerophosphate 2-O-acetyltransferase (2.3.1.105)

C12Y 203/01106	..	Tartronate O-hydroxycinnamoyltransferase (2.3.1.106)
C12Y 203/01107	..	Deacetylindoline O-acetyltransferase (2.3.1.107)
C12Y 203/01108	..	Alpha-tubulin N-acetyltransferase (2.3.1.108)
C12Y 203/01109	..	Arginine N-succinyltransferase (2.3.1.109)
C12Y 203/0111	..	Tyramine N-feruloyltransferase (2.3.1.110)
C12Y 203/01111	..	Mycocerosate synthase (2.3.1.111)
C12Y 203/01112	..	D-Tryptophan N-malonyltransferase (2.3.1.112)
C12Y 203/01113	..	Anthranilate N-malonyltransferase (2.3.1.113)
C12Y 203/01114	..	3,4-Dichloroaniline N-malonyltransferase (2.3.1.114)
C12Y 203/01115	..	Isoflavone-7-O-beta-glucoside 6"-O-malonyltransferase (2.3.1.115)
C12Y 203/01116	..	Flavonol-3-O-beta-glucoside O-malonyltransferase (2.3.1.116)
C12Y 203/01117	..	2,3,4,5-Tetrahydropyridine-2,6-dicarboxylate N-succinyltransferase (2.3.1.117)
C12Y 203/01118	..	N-Hydroxyarylamine O-acetyltransferase (2.3.1.118)
C12Y 203/01119	..	Icosanoyl-CoA synthase (2.3.1.119)
C12Y 203/01121	..	1-Alkenylglycerophosphoethanolamine O-acyltransferase (2.3.1.121)
C12Y 203/01122	..	Trehalose O-mycolyltransferase (2.3.1.122)
C12Y 203/01123	..	Dolichol O-acyltransferase (2.3.1.123)
C12Y 203/01125	..	1-Alkyl-2-acetylgllycerol O-acyltransferase (2.3.1.125)
C12Y 203/01126	..	Isocitrate O-dihydroxycinnamoyltransferase (2.3.1.126)
C12Y 203/01127	..	Ornithine N-benzoyltransferase (2.3.1.127)
C12Y 203/01128	..	Ribosomal-protein-alanine N-acetyltransferase (2.3.1.128)
C12Y 203/01129	..	Acyl-[acyl-carrier-protein]-UDP-N-acetylglucosamine O-acyltransferase (2.3.1.129)
C12Y 203/0113	..	Galactarate O-hydroxycinnamoyltransferase (2.3.1.130)
C12Y 203/01131	..	Glucarate O-hydroxycinnamoyltransferase (2.3.1.131)
C12Y 203/01132	..	Glucarolactone O-hydroxycinnamoyltransferase (2.3.1.132)
C12Y 203/01133	..	Shikimate O-hydroxycinnamoyltransferase (2.3.1.133)
C12Y 203/01134	..	Galactolipid O-acyltransferase (2.3.1.134)
C12Y 203/01135	..	Phosphatidylcholine--retinol O-acyltransferase (2.3.1.135)
C12Y 203/01136	..	Polysialic-acid O-acetyltransferase (2.3.1.136)
C12Y 203/01137	..	Carnitine O-octanoyltransferase (2.3.1.137)
C12Y 203/01138	..	Putrescine N-hydroxycinnamoyltransferase (2.3.1.138)
C12Y 203/01139	..	Ecdysone O-acyltransferase (2.3.1.139)
C12Y 203/0114	..	Rosmarinate synthase (2.3.1.140)
C12Y 203/01141	..	Galactosylacylglycerol O-acyltransferase (2.3.1.141)
C12Y 203/01142	..	Glycoprotein O-fatty-acyltransferase (2.3.1.142)
C12Y 203/01143	..	Beta-glucogallin--tetrakisgalloylglucose O-galloyltransferase (2.3.1.143)
C12Y 203/01144	..	Anthranilate N-benzoyltransferase (2.3.1.144)
C12Y 203/01145	..	Piperidine N-piperoyltransferase (2.3.1.145)
C12Y 203/01146	..	Pinosylvin synthase (2.3.1.146)
C12Y 203/01147	..	Glycerophospholipid arachidonoyl-transferase (CoA-independent) (2.3.1.147)

C12Y 203/01148	..	Glycerophospholipid acyltransferase (CoA-dependent) (2.3.1.148)
C12Y 203/01149	..	Platelet-activating factor acetyltransferase (2.3.1.149)
C12Y 203/0115	..	Salutaridinol 7-O-acetyltransferase (2.3.1.150)
C12Y 203/01151	..	Benzophenone synthase (2.3.1.151)
C12Y 203/01152	..	Alcohol O-cinnamoyltransferase (2.3.1.152)
C12Y 203/01153	..	Anthocyanin 5-aromatic acyltransferase (2.3.1.153)
C12Y 203/01154	..	Propionyl-CoA C(2)-trimethyltridecanoyltransferase (2.3.1.154)
C12Y 203/01155	..	Acetyl-CoA C-myristoyltransferase (2.3.1.155)
C12Y 203/01156	..	Phloroisovalerophenone synthase (2.3.1.156)
C12Y 203/01157	..	Glucosamine-1-phosphate N-acetyltransferase (2.3.1.157)
C12Y 203/01158	..	Phospholipid:diacylglycerol acyltransferase (2.3.1.158)
C12Y 203/01159	..	Acridone synthase (2.3.1.159)
C12Y 203/0116	..	Vinorine synthase (2.3.1.160)
C12Y 203/01161	..	Lovastatin nonaketide synthase (2.3.1.161)
C12Y 203/01162	..	Taxadien-5-alpha-ol O-acetyltransferase (2.3.1.162)
C12Y 203/01163	..	10-Hydroxytaxane O-acetyltransferase (2.3.1.163)
C12Y 203/01164	..	Isopenicillin-N N-acyltransferase (2.3.1.164)
C12Y 203/01165	..	6-Methylsalicylic acid synthase (2.3.1.165)
C12Y 203/01166	..	2-Alpha-hydroxytaxane 2-O-benzoyltransferase (2.3.1.166)
C12Y 203/01167	..	10-Deacetylbaaccatin III 10-O-acetyltransferase (2.3.1.167)
C12Y 203/01168	..	Dihydrolipoyllysine-residue (2-methylpropanoyl)transferase (2.3.1.168)
C12Y 203/01169	..	CO-Methylating acetyl-CoA synthase (2.3.1.169)
C12Y 203/0117	..	6'-Deoxychalcone synthase (2.3.1.170)
C12Y 203/01171	..	Anthocyanin 6''-O-malonyltransferase (2.3.1.171)
C12Y 203/01172	..	Anthocyanin 5-O-glucoside 6'''-O-malonyltransferase (2.3.1.172)
C12Y 203/01173	..	Flavonol-3-O-triglucoside O-coumaroyltransferase (2.3.1.173)
C12Y 203/01174	..	3-Oxoadipyl-CoA thiolase (2.3.1.174)
C12Y 203/01175	..	Deacetylcephalosporin-C acetyltransferase (2.3.1.175)
C12Y 203/01176	..	Propanoyl-CoA C-acyltransferase (2.3.1.176)
C12Y 203/01177	..	Biphenyl synthase (2.3.1.177)
C12Y 203/01178	..	Diaminobutyrate acetyltransferase (2.3.1.178)
C12Y 203/01179	..	Beta-ketoacyl-acyl-carrier-protein synthase II (2.3.1.179)
C12Y 203/0118	..	Beta-ketoacyl-acyl-carrier-protein synthase III (2.3.1.180)
C12Y 203/01181	..	Lipoyl(octanoyl) transferase (2.3.1.181)
C12Y 203/01182	..	(R)-Citramalate synthase (2.3.1.182)
C12Y 203/01183	..	Phosphinothricin acetyltransferase (2.3.1.183)
C12Y 203/01184	..	Acyl-homoserine-lactone synthase (2.3.1.184)
C12Y 203/01185	..	Tropine acyltransferase (2.3.1.185)
C12Y 203/01186	..	Pseudotropine acyltransferase (2.3.1.186)
C12Y 203/01187	..	Acetyl-S-ACP:malonate ACP transferase (2.3.1.187)



C12Y 203/01188	..	Omega-hydroxypalmitate O-feruloyl transferase (2.3.1.188)
C12Y 203/01189	..	Mycothiol synthase (2.3.1.189)
C12Y 203/0119	..	Acetoin dehydrogenase (2.3.1.190)
C12Y 203/01191	..	UDP-3-O-(3-hydroxymyristoyl)glucosamine N-acyltransferase (2.3.1.191)
C12Y 203/01192	..	Glycine N-phenylacetyltransferase (2.3.1.192)
C12Y 203/01193	..	tRNA(Met) cytidine acetyltransferase (2.3.1.193)
C12Y 203/01194	..	Acetoacetyl-CoA synthase (2.3.1.194)
C12Y 203/01195	..	(Z)-3-Hexen-1-ol acetyltransferase (2.3.1.195)
C12Y 203/01196	..	Benzyl alcohol O-benzoyltransferase (2.3.1.196)
C12Y 203/02	.	Aminoacyltransferases (2.3.2)
C12Y 203/02001	..	D-Glutamyltransferase (2.3.2.1)
C12Y 203/02002	..	Gamma-glutamyltransferase (2.3.2.2)
C12Y 203/02003	..	Lysyltransferase (2.3.2.3)
C12Y 203/02004	..	Gamma-glutamylcyclotransferase (2.3.2.4)
C12Y 203/02005	..	Glutaminyl-peptide cyclotransferase (2.3.2.5)
C12Y 203/02006	..	Leucyltransferase (2.3.2.6)
C12Y 203/02007	..	Aspartyltransferase (2.3.2.7)
C12Y 203/02008	..	Arginyltransferase (2.3.2.8)
C12Y 203/02009	..	Agaritine gamma-glutamyltransferase (2.3.2.9)
C12Y 203/0201	..	UDP-N-acetylmuramoylpentapeptide-lysine N6-alanyltransferase (2.3.2.10)
C12Y 203/02011	..	Alanylphosphatidylglycerol synthase (2.3.2.11)
C12Y 203/02012	..	Peptidyltransferase (2.3.2.12)
C12Y 203/02013	..	Protein-glutamine gamma-glutamyltransferase (2.3.2.13), i.e. transglutaminase or factor XIII
C12Y 203/02014	..	D-Alanine gamma-glutamyltransferase (2.3.2.14)
C12Y 203/02015	..	Glutathione gamma-glutamylcysteinyltransferase (2.3.2.15), i.e. phytochelatase synthase
C12Y 203/02016	..	Lipid II:glycine glycytransferase (2.3.2.16)
C12Y 203/02017	..	N-Acetylmuramoyl-L-alanyl-D-glutamyl-L-lysyl-(N6-glycyl)-D-alanyl-D-alanine-diphosphoundecaprenyl-N-acetylglucosamine:glycin (2.3.2.17)
C12Y 203/02018	..	N-Acetylmuramoyl-L-alanyl-D-glutamyl-L-lysyl-(N6-triglycine)-D-alanyl-D-alanine-diphosphoundecaprenyl-N-acetylglucosamine:glycin (2.3.2.18)
C12Y 203/03	.	Acyl groups converted into alkyl on transfer (2.3.3)
C12Y 203/03001	..	Citrate (Si)-synthase (2.3.3.1)
C12Y 203/03002	..	Decylcitrate synthase (2.3.3.2)
C12Y 203/03003	..	Citrate (Re)-synthase (2.3.3.3)
C12Y 203/03004	..	Decylhomocitrate synthase (2.3.3.4)
C12Y 203/03005	..	2-Methylcitrate synthase (2.3.3.5)
C12Y 203/03006	..	2-Ethylmalate synthase (2.3.3.6)
C12Y 203/03007	..	3-Ethylmalate synthase (2.3.3.7)



C12Y 203/03008	..	ATP citrate synthase (2.3.3.8)
C12Y 203/03009	..	Malate synthase (2.3.3.9)
C12Y 203/0301	..	Hydroxymethylglutaryl-CoA synthase (2.3.3.10)
C12Y 203/03011	..	2-Hydroxyglutarate synthase (2.3.3.11)
C12Y 203/03012	..	3-Propylmalate synthase (2.3.3.12)
C12Y 203/03013	..	2-Isopropylmalate synthase (2.3.3.13)
C12Y 203/03014	..	Homocitrate synthase (2.3.3.14)
C12Y 203/03015	..	Sulfoacetaldehyde acetyltransferase (2.3.3.15)

## **C12Y 204/00      Glycosyltransferases (2.4)**

C12Y 204/01	.	Hexosyltransferases (2.4.1)
C12Y 204/01001	..	Phosphorylase (2.4.1.1)
C12Y 204/01002	..	Dextrin dextranase (2.4.1.2)
C12Y 204/01004	..	Amylosucrase (2.4.1.4)
C12Y 204/01005	..	Dextranase (2.4.1.5)
C12Y 204/01007	..	Sucrose phosphorylase (2.4.1.7)
C12Y 204/01008	..	Maltose phosphorylase (2.4.1.8)
C12Y 204/01009	..	Inulosucrase (2.4.1.9)
C12Y 204/0101	..	Levansucrase (2.4.1.10)
C12Y 204/01011	..	Glycogen(starch) synthase (2.4.1.11)
C12Y 204/01012	..	Cellulose synthase (UDP-forming) (2.4.1.12)
C12Y 204/01013	..	Sucrose synthase (2.4.1.13)
C12Y 204/01014	..	Sucrose-phosphate synthase (2.4.1.14)
C12Y 204/01015	..	Alpha,alpha-trehalose-phosphate synthase (UDP-forming) (2.4.1.15)
C12Y 204/01016	..	Chitin synthase (2.4.1.16)
C12Y 204/01017	..	Glucuronosyltransferase (2.4.1.17)
C12Y 204/01018	..	1,4-Alpha-glucan branching enzyme (2.4.1.18), i.e. glucan branching enzyme
C12Y 204/01019	..	Cyclomaltodextrin glucanotransferase (2.4.1.19)
C12Y 204/0102	..	Cellobiose phosphorylase (2.4.1.20)
C12Y 204/01021	..	Starch synthase (2.4.1.21)
C12Y 204/01022	..	Lactose synthase (2.4.1.22)
C12Y 204/01023	..	Sphingosine beta-galactosyltransferase (2.4.1.23)
C12Y 204/01024	..	1,4-Alpha-glucan 6-alpha-glucosyltransferase (2.4.1.24)
C12Y 204/01025	..	4-Alpha-glucanotransferase (2.4.1.25)
C12Y 204/01026	..	DNA alpha-glucosyltransferase (2.4.1.26)
C12Y 204/01027	..	DNA beta-glucosyltransferase (2.4.1.27)
C12Y 204/01028	..	Glucosyl-DNA beta-glucosyltransferase (2.4.1.28)
C12Y 204/01029	..	Cellulose synthase (GDP-forming) (2.4.1.29)
C12Y 204/0103	..	1,3-Beta-oligoglucan phosphorylase (2.4.1.30)

C12Y 204/01031	..	Laminaribiose phosphorylase (2.4.1.31)
C12Y 204/01032	..	Glucomannan 4-beta-mannosyltransferase (2.4.1.32)
C12Y 204/01033	..	Alginate synthase (2.4.1.33)
C12Y 204/01034	..	1,3-Beta-glucan synthase (2.4.1.34)
C12Y 204/01035	..	Phenol beta-glucosyltransferase (2.4.1.35)
C12Y 204/01036	..	Alpha,alpha-trehalose-phosphate synthase (GDP-forming) (2.4.1.36)
C12Y 204/01037	..	Fucosylgalactoside 3-alpha-galactosyltransferase (2.4.1.37)
C12Y 204/01038	..	Beta-N-acetylglucosaminylglycopeptide beta-1,4-galactosyltransferase (2.4.1.38)
C12Y 204/01039	..	Steroid N-acetylglucosaminyltransferase (2.4.1.39)
C12Y 204/0104	..	Glycoprotein-fucosylgalactoside alpha-N-acetylglactosaminyltransferase (2.4.1.40)
C12Y 204/01041	..	Polypeptide N-acetylglactosaminyltransferase (2.4.1.41)
C12Y 204/01043	..	Polygalacturonate 4-alpha-galacturonosyltransferase (2.4.1.43)
C12Y 204/01044	..	Lipopolysaccharide 3-alpha-galactosyltransferase (2.4.1.44)
C12Y 204/01045	..	2-Hydroxyacylsphingosine 1-beta-galactosyltransferase (2.4.1.45)
C12Y 204/01046	..	Monogalactosyldiacylglycerol synthase (2.4.1.46)
C12Y 204/01047	..	N-Acylsphingosine galactosyltransferase (2.4.1.47)
C12Y 204/01048	..	Heteroglycan alpha-mannosyltransferase (2.4.1.48)
C12Y 204/01049	..	Cellodextrin phosphorylase (2.4.1.49)
C12Y 204/0105	..	Procollagen galactosyltransferase (2.4.1.50)
C12Y 204/01051	..	UDP-N-acetylglucosamine-glycoprotein N-acetylglucosaminyltransferase (2.4.1.51) ( <a href="#">C12Y 204/01101</a> , <a href="#">C12Y 204/01143</a> - <a href="#">C12Y 204/01145</a> take precedence )
C12Y 204/01052	..	Poly(glycerol-phosphate) alpha-glucosyltransferase (2.4.1.52)
C12Y 204/01053	..	Poly(ribitol-phosphate) beta-glucosyltransferase (2.4.1.53)
C12Y 204/01054	..	Undecaprenyl-phosphate mannosyltransferase (2.4.1.54)
C12Y 204/01056	..	Lipopolysaccharide N-acetylglucosaminyltransferase (2.4.1.56)
C12Y 204/01057	..	Phosphatidylinositol alpha-mannosyltransferase (2.4.1.57)
C12Y 204/01058	..	Lipopolysaccharide glucosyltransferase I (2.4.1.58)
C12Y 204/0106	..	Abequosyltransferase (2.4.1.60)
C12Y 204/01062	..	Ganglioside galactosyltransferase (2.4.1.62)
C12Y 204/01063	..	Linamarin synthase (2.4.1.63)
C12Y 204/01064	..	Alpha,alpha-trehalose phosphorylase (2.4.1.64)
C12Y 204/01065	..	3-Galactosyl-N-acetylglucosaminide 4-alpha-L-fucosyltransferase (2.4.1.65), i.e. alpha-1-3 fucosyltransferase
C12Y 204/01066	..	Procollagen glucosyltransferase (2.4.1.66)
C12Y 204/01067	..	Galactinol--raffinose galactosyltransferase (2.4.1.67)
C12Y 204/01068	..	Glycoprotein 6-alpha-L-fucosyltransferase (2.4.1.68), i.e. FUT8
C12Y 204/01069	..	Galactoside 2-alpha-L-fucosyltransferase (2.4.1.69)
C12Y 204/0107	..	Poly(ribitol-phosphate) N-acetylglucosaminyltransferase (2.4.1.70)
C12Y 204/01071	..	Arylamine glucosyltransferase (2.4.1.71)
C12Y 204/01073	..	Lipopolysaccharide glucosyltransferase II (2.4.1.73)

C12Y 204/01074	..	Glycosaminoglycan galactosyltransferase (2.4.1.74)
C12Y 204/01078	..	Phosphopolyprenol glucosyltransferase (2.4.1.78)
C12Y 204/01079	..	Globotriaosylceramide 3-beta-N-acetylglactosaminyltransferase (2.4.1.79)
C12Y 204/0108	..	Ceramide glucosyltransferase (2.4.1.80)
C12Y 204/01081	..	Flavone 7-O-beta-glucosyltransferase (2.4.1.81)
C12Y 204/01082	..	Galactinol--sucrose galactosyltransferase (2.4.1.82)
C12Y 204/01083	..	Dolichyl-phosphate beta-D-mannosyltransferase (2.4.1.83)
C12Y 204/01085	..	Cyanohydrin beta-glucosyltransferase (2.4.1.85)
C12Y 204/01086	..	Glucosaminylgalactosylglucosylceramide beta-galactosyltransferase (2.4.1.86)
C12Y 204/01087	..	N-Acetylactosaminide 3-alpha-galactosyltransferase (2.4.1.87), i.e. alpha-1,3-galactosyltransferase
C12Y 204/01088	..	Globoside alpha-N-acetylglactosaminyltransferase (2.4.1.88)
C12Y 204/0109	..	N-Acetylactosamine synthase (2.4.1.90)
C12Y 204/01091	..	Flavonol 3-O-glucosyltransferase (2.4.1.91)
C12Y 204/01092	..	(N-acetylneuraminy)-galactosylglucosylceramide N-acetylglactosaminyltransferase (2.4.1.92)
C12Y 204/01094	..	Protein N-acetylglucosaminyltransferase (2.4.1.94)
C12Y 204/01095	..	Bilirubin-glucuronoside glucuronosyltransferase (2.4.1.95)
C12Y 204/01096	..	sn-Glycerol-3-phosphate 1-galactosyltransferase (2.4.1.96)
C12Y 204/01097	..	1,3-Beta-D-glucan phosphorylase (2.4.1.97)
C12Y 204/01099	..	Sucrose:sucrose fructosyltransferase (2.4.1.99)
C12Y 204/011	..	2,1-Fructan:2,1-fructan 1-fructosyltransferase (2.4.1.100)
C12Y 204/01101	..	Alpha-1,3-mannosyl-glycoprotein 2-beta-N-acetylglucosaminyltransferase (2.4.1.101)
C12Y 204/01102	..	Beta-1,3-galactosyl-O-glycosyl-glycoprotein beta-1,6-N-acetylglucosaminyltransferase (2.4.1.102)
C12Y 204/01103	..	Alizarin 2-beta-glucosyltransferase (2.4.1.103)
C12Y 204/01104	..	o-Dihydroxycoumarin 7-O-glucosyltransferase (2.4.1.104)
C12Y 204/01105	..	Vitexin beta-glucosyltransferase (2.4.1.105)
C12Y 204/01106	..	Isovitexin beta-glucosyltransferase (2.4.1.106)
C12Y 204/01109	..	Dolichyl-phosphate-mannose-protein mannosyltransferase (2.4.1.109)
C12Y 204/0111	..	tRNA-queuosine beta-mannosyltransferase (2.4.1.110)
C12Y 204/01111	..	Coniferyl-alcohol glucosyltransferase (2.4.1.111)
C12Y 204/01113	..	Alpha-1,4-glucan-protein synthase (ADP-forming) (2.4.1.113)
C12Y 204/01114	..	2-Coumarate O-beta-glucosyltransferase (2.4.1.114)
C12Y 204/01115	..	Anthocyanidin 3-O-glucosyltransferase (2.4.1.115)
C12Y 204/01116	..	Cyanidin 3-O-rutinoside 5-O-glucosyltransferase (2.4.1.116)
C12Y 204/01117	..	Dolichyl-phosphate beta-glucosyltransferase (2.4.1.117)
C12Y 204/01118	..	Cytokinin 7-beta-glucosyltransferase (2.4.1.118)
C12Y 204/01119	..	Dolichyl-diphosphooligosaccharide--protein glycotransferase (2.4.1.119)
C12Y 204/0112	..	Sinapate 1-glucosyltransferase (2.4.1.120)

C12Y 204/01121	..	Indole-3-acetate beta-glucosyltransferase (2.4.1.121)
C12Y 204/01122	..	Glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase (2.4.1.122)
C12Y 204/01123	..	Inositol 3-alpha-galactosyltransferase (2.4.1.123) i.e. galactinol-synthase
C12Y 204/01125	..	Sucrose--1,6-alpha-glucan 3(6)-alpha-glucosyltransferase (2.4.1.125)
C12Y 204/01126	..	Hydroxycinnamate 4-beta-glucosyltransferase (2.4.1.126)
C12Y 204/01127	..	Monoterpenol beta-glucosyltransferase (2.4.1.127)
C12Y 204/01128	..	Scopoletin glucosyltransferase (2.4.1.128)
C12Y 204/01129	..	Peptidoglycan glycosyltransferase (2.4.1.129)
C12Y 204/0113	..	Dolichyl-phosphate-mannose-glycolipid alpha-mannosyltransferase (2.4.1.130) ( <a href="#">C12Y 204/01258</a> - <a href="#">C12Y 204/01261</a> take precedence )
C12Y 204/01131	..	GDP-Man:Man(3)GlcNAc2-PP-Dol alpha-1,2-mannosyltransferase (2.4.1.131)
C12Y 204/01132	..	GDP-Man:Man(1)GlcNAc2-PP-Dol alpha-1,3-mannosyltransferase (2.4.1.132)
C12Y 204/01133	..	Xylosylprotein 4-beta-galactosyltransferase (2.4.1.133)
C12Y 204/01134	..	Galactosylxylosylprotein 3-beta-galactosyltransferase (2.4.1.134)
C12Y 204/01135	..	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase (2.4.1.135)
C12Y 204/01136	..	Gallate 1-beta-glucosyltransferase (2.4.1.136)
C12Y 204/01137	..	sn-Glycerol-3-phosphate 2-alpha-galactosyltransferase (2.4.1.137)
C12Y 204/01138	..	Mannotetraose 2-alpha-N-acetylglucosaminyltransferase (2.4.1.138)
C12Y 204/01139	..	Maltose synthase (2.4.1.139)
C12Y 204/0114	..	Alternansucrase (2.4.1.140)
C12Y 204/01141	..	N-Acetylglucosaminyldiphosphodolichol N-acetylglucosaminyltransferase (2.4.1.141)
C12Y 204/01142	..	Chitobiosyldiphosphodolichol beta-mannosyltransferase (2.4.1.142)
C12Y 204/01143	..	Alpha-1,6-mannosyl-glycoprotein 2-beta-N-acetylglucosaminyltransferase (2.4.1.143)
C12Y 204/01144	..	Beta-1,4-mannosyl-glycoprotein 4-beta-N-acetylglucosaminyltransferase (2.4.1.144)
C12Y 204/01145	..	Alpha-1,3-mannosyl-glycoprotein 4-beta-N-acetylglucosaminyltransferase (2.4.1.145)
C12Y 204/01146	..	Beta-1,3-galactosyl-O-glycosyl-glycoprotein beta-1,3-N-acetylglucosaminyltransferase (2.4.1.146)
C12Y 204/01147	..	Acetylglactosaminyl-O-glycosyl-glycoprotein beta-1,3-N-acetylglucosaminyltransferase (2.4.1.147)
C12Y 204/01148	..	Acetylglactosaminyl-O-glycosyl-glycoprotein beta-1,6-N-acetylglucosaminyltransferase (2.4.1.148)
C12Y 204/01149	..	N-Acetylactosaminide beta-1,3-N-acetylglucosaminyltransferase (2.4.1.149)
C12Y 204/0115	..	N-Acetylactosaminide beta-1,6-N-acetylglucosaminyl-transferase (2.4.1.150)
C12Y 204/01152	..	4-Galactosyl-N-acetylglucosaminide 3-alpha-L-fucosyltransferase (2.4.1.152)
C12Y 204/01153	..	Dolichyl-phosphate alpha-N-acetylglucosaminyltransferase (2.4.1.153)
C12Y 204/01155	..	Alpha-1,6-mannosyl-glycoprotein 6-beta-N-acetylglucosaminyltransferase (2.4.1.155)
C12Y 204/01156	..	Indolylacetyl-myo-inositol galactosyltransferase (2.4.1.156)

C12Y 204/01157	..	1,2-Diacylglycerol 3-glucosyltransferase (2.4.1.157)
C12Y 204/01158	..	13-Hydroxydocosanoate 13-beta-glucosyltransferase (2.4.1.158)
C12Y 204/01159	..	Flavonol-3-O-glucoside L-rhamnosyltransferase (2.4.1.159)
C12Y 204/0116	..	Pyridoxine 5'-O-beta-D-glucosyltransferase (2.4.1.160)
C12Y 204/01161	..	Oligosaccharide 4-alpha-D-glucosyltransferase (2.4.1.161)
C12Y 204/01162	..	Aldose beta-D-fructosyltransferase (2.4.1.162)
C12Y 204/01163	..	Beta-galactosyl-N-acetylglucosaminylgalactosylglucosyl-ceramide beta-1,3-acetylglucosaminyltransferase (2.4.1.163)
C12Y 204/01164	..	Galactosyl-N-acetylglucosaminylgalactosylglucosyl-ceramide beta-1,6-N-acetylglucosaminyltransferase (2.4.1.164)
C12Y 204/01165	..	N-Acetylneuraminylgalactosylglucosylceramide beta-1,4-N-acetylglactosaminyltransferase (2.4.1.165)
C12Y 204/01166	..	Raffinose--raffinose alpha-galactosyltransferase (2.4.1.166)
C12Y 204/01167	..	Sucrose 6F-alpha-galactosyltransferase (2.4.1.167)
C12Y 204/01168	..	Xyloglucan 4-glucosyltransferase (2.4.1.168)
C12Y 204/0117	..	Isoflavone 7-O-glucosyltransferase (2.4.1.170)
C12Y 204/01171	..	Methyl-ONN-azoxymethanol beta-D-glucosyltransferase (2.4.1.171)
C12Y 204/01172	..	Salicyl-alcohol beta-D-glucosyltransferase (2.4.1.172)
C12Y 204/01173	..	Sterol 3-beta-glucosyltransferase (2.4.1.173)
C12Y 204/01174	..	Glucuronylgalactosylproteoglycan 4-beta-N-acetylglactosaminyltransferase (2.4.1.174), i.e. chondroitin sulfate N-acetylglactosaminyltransferase-1
C12Y 204/01175	..	Glucuronosyl-N-acetylglactosaminyl-proteoglycan 4-beta-N-acetylglactosaminyltransferase II (2.4.1.175)
C12Y 204/01176	..	Gibberellin beta-D-glucosyltransferase (2.4.1.176)
C12Y 204/01177	..	Cinnamate beta-D-glucosyltransferase (2.4.1.177)
C12Y 204/01178	..	Hydroxymandelonitrile glucosyltransferase (2.4.1.178)
C12Y 204/01179	..	Lactosylceramide beta-1,3-galactosyltransferase (2.4.1.179)
C12Y 204/0118	..	Lipopolysaccharide N-acetylmannosaminouronosyltransferase (2.4.1.180)
C12Y 204/01181	..	Hydroxyanthraquinone glucosyltransferase (2.4.1.181)
C12Y 204/01182	..	Lipid-A-disaccharide synthase (2.4.1.182)
C12Y 204/01183	..	Alpha-1,3-glucan synthase (2.4.1.183)
C12Y 204/01184	..	Galactolipid galactosyltransferase (2.4.1.184)
C12Y 204/01185	..	Flavanone 7-O-beta-glucosyltransferase (2.4.1.185)
C12Y 204/01186	..	Glycogenin glucosyltransferase (2.4.1.186)
C12Y 204/01187	..	N-Acetylglucosaminylidiphosphoundecaprenol N-acetyl-beta-D-mannosaminyltransferase (2.4.1.187)
C12Y 204/01188	..	N-Acetylglucosaminylidiphosphoundecaprenol glucosyltransferase (2.4.1.188)
C12Y 204/01189	..	Luteolin 7-O-glucuronosyltransferase (2.4.1.189)
C12Y 204/0119	..	Luteolin-7-O-glucuronide 2"-O-glucuronosyltransferase (2.4.1.190)
C12Y 204/01191	..	Luteolin-7-O-diglucuronide 4'-O-glucuronosyltransferase (2.4.1.191)
C12Y 204/01192	..	Nuatigenin 3-beta-glucosyltransferase (2.4.1.192)
C12Y 204/01193	..	Sarsapogenin 3-beta-glucosyltransferase (2.4.1.193)

C12Y 204/01194	..	4-Hydroxybenzoate 4-O-beta-D-glucosyltransferase (2.4.1.194)
C12Y 204/01195	..	N-Hydroxythioamide S-beta-glucosyltransferase (2.4.1.195)
C12Y 204/01196	..	Nicotinate glucosyltransferase (2.4.1.196)
C12Y 204/01197	..	High-mannose-oligosaccharide beta-1,4-N-acetylglucosaminyltransferase (2.4.1.197)
C12Y 204/01198	..	Phosphatidylinositol N-acetylglucosaminyltransferase (2.4.1.198)
C12Y 204/01199	..	Beta-mannosylphosphodecaprenol--mannooligosaccharide 6-mannosyltransferase (2.4.1.199)
C12Y 204/01201	..	Alpha-1,6-mannosyl-glycoprotein 4-beta-N-acetylglucosaminyltransferase (2.4.1.201)
C12Y 204/01202	..	2,4-Dihydroxy-7-methoxy-2H-1,4-benzoxazin-3(4H)-one 2-D-glucosyltransferase (2.4.1.202)
C12Y 204/01203	..	Trans-zeatin O-beta-D-glucosyltransferase (2.4.1.203)
C12Y 204/01205	..	Galactogen 6-beta-galactosyltransferase (2.4.1.205)
C12Y 204/01206	..	Lactosylceramide 1,3-N-acetyl-beta-D-glucosaminyltransferase (2.4.1.206)
C12Y 204/01207	..	Xyloglucan:xyloglucosyl transferase (2.4.1.207)
C12Y 204/01208	..	Diglucosyl diacylglycerol synthase (2.4.1.208)
C12Y 204/01209	..	Cis-p-coumarate glucosyltransferase (2.4.1.209)
C12Y 204/0121	..	Limonoid glucosyltransferase (2.4.1.210)
C12Y 204/01211	..	1,3-Beta-galactosyl-N-acetylhexosamine phosphorylase (2.4.1.211)
C12Y 204/01212	..	Hyaluronan synthase (2.4.1.212)
C12Y 204/01213	..	Glucosylglycerol-phosphate synthase (2.4.1.213)
C12Y 204/01214	..	Glycoprotein 3-alpha-L-fucosyltransferase (2.4.1.214)
C12Y 204/01215	..	Cis-zeatin O-beta-D-glucosyltransferase (2.4.1.215)
C12Y 204/01216	..	Trehalose 6-phosphate phosphorylase (2.4.1.216)
C12Y 204/01217	..	Mannosyl-3-phosphoglycerate synthase (2.4.1.217)
C12Y 204/01218	..	Hydroquinone glucosyltransferase (2.4.1.218)
C12Y 204/01219	..	Vomilenine glucosyltransferase (2.4.1.219)
C12Y 204/0122	..	Indoxyl-UDPG glucosyltransferase (2.4.1.220)
C12Y 204/01221	..	Peptide-O-fucosyltransferase (2.4.1.221)
C12Y 204/01222	..	O-Fucosylpeptide 3-beta-N-acetylglucosaminyltransferase (2.4.1.222)
C12Y 204/01223	..	Glucuronyl-galactosyl-proteoglycan 4-alpha-N-acetylglucosaminyltransferase (2.4.1.223)
C12Y 204/01224	..	Glucuronosyl-N-acetylglucosaminyl-proteoglycan 4-alpha-N-acetylglucosaminyltransferase (2.4.1.224)
C12Y 204/01225	..	N-Acetylglucosaminyl-proteoglycan 4-beta-glucuronosyltransferase (2.4.1.225)
C12Y 204/01226	..	N-Acetylgalactosaminyl-proteoglycan 3-beta-glucuronosyltransferase (2.4.1.226), i.e. chondroitin sulfate glucuronyltransferase
C12Y 204/01227	..	Undecaprenyldiphospho-muramoylpentapeptide beta-N-acetylglucosaminyltransferase (2.4.1.227)
C12Y 204/01228	..	Lactosylceramide 4-alpha-galactosyltransferase (2.4.1.228)
C12Y 204/01229	..	[Skp1-protein-hydroxyproline N-acetylglucosaminyltransferase (2.4.1.229)



C12Y 204/0123	..	Kojibiose phosphorylase (2.4.1.230)
C12Y 204/01231	..	Alpha,alpha-trehalose phosphorylase (configuration-retaining) (2.4.1.231)
C12Y 204/01232	..	Initiation-specific alpha-1,6-mannosyltransferase (2.4.1.232)
C12Y 204/01234	..	Kaempferol 3-O-galactosyltransferase (2.4.1.234)
C12Y 204/01236	..	Flavanone 7-O-glucoside 2"-O-beta-L-rhamnosyltransferase (2.4.1.236)
C12Y 204/01237	..	Flavonol 7-O-beta-glucosyltransferase (2.4.1.237)
C12Y 204/01238	..	Anthocyanin 3'-O-beta-glucosyltransferase (2.4.1.238)
C12Y 204/01239	..	Flavonol-3-O-glucoside glucosyltransferase (2.4.1.239)
C12Y 204/0124	..	Flavonol-3-O-glycoside glucosyltransferase (2.4.1.240)
C12Y 204/01241	..	Digalactosyldiacylglycerol synthase (2.4.1.241)
C12Y 204/01242	..	NDP-glucose--starch glucosyltransferase (2.4.1.242)
C12Y 204/01243	..	6G-Fructosyltransferase (2.4.1.243)
C12Y 204/01244	..	N-Acetyl-beta-glucosaminyl-glycoprotein 4-beta-N-acetylgalactosaminyltransferase (2.4.1.244)
C12Y 204/01245	..	Alpha,alpha-trehalose synthase (2.4.1.245)
C12Y 204/01246	..	Mannosylfructose-phosphate synthase (2.4.1.246)
C12Y 204/01247	..	Beta-D-galactosyl-(1->4)-L-rhamnose phosphorylase (2.4.1.247)
C12Y 204/01248	..	Cycloisomaltooligosaccharide glucanotransferase (2.4.1.248)
C12Y 204/01249	..	Delphinidin 3',5'-O-glucosyltransferase (2.4.1.249)
C12Y 204/0125	..	D-Inositol-3-phosphate glycosyltransferase (2.4.1.250)
C12Y 204/01251	..	GlcA-beta-(1->2)-D-Man-alpha-(1->3)-D-Glc-beta-(1->4)-D-Glc-alpha-1-diphosphoundecaprenol 4-beta-mannosyltransferase (2.4.1.251)
C12Y 204/01252	..	GDP-mannose:cellobiosyl-diphosphopolyprenol alpha-mannosyltransferase (2.4.1.252)
C12Y 204/01253	..	Baicalein 7-O-glucuronosyltransferase (2.4.1.253)
C12Y 204/01254	..	Cyanidin-3-O-glucoside 2-O-glucuronosyltransferase (2.4.1.254)
C12Y 204/01255	..	Protein O-GlcNAc transferase (2.4.1.255)
C12Y 204/01256	..	Dol-P-Glc:Glc2Man9GlcNAc2-PP-Dol alpha-1,2-glucosyltransferase (2.4.1.256)
C12Y 204/01257	..	GDP-Man:Man2GlcNAc2-PP-Dol alpha-1,6-mannosyltransferase (2.4.1.257)
C12Y 204/01258	..	Dol-P-Man:Man5GlcNAc2-PP-Dol alpha-1,3-mannosyltransferase (2.4.1.258)
C12Y 204/01259	..	Dol-P-Man:Man6GlcNAc2-PP-Dol alpha-1,2-mannosyltransferase (2.4.1.259)
C12Y 204/0126	..	Dol-P-Man:Man7GlcNAc2-PP-Dol alpha-1,6-mannosyltransferase (2.4.1.260)
C12Y 204/01261	..	Dol-P-Man:Man8GlcNAc2-PP-Dol alpha-1,2-mannosyltransferase (2.4.1.261)
C12Y 204/01262	..	Soyasapogenol glucuronosyltransferase (2.4.1.262)
C12Y 204/01263	..	Abscisate beta-glucosyltransferase (2.4.1.263)
C12Y 204/01264	..	D-Man-alpha-(1->3)-D-Glc-beta-(1->4)-D-Glc-alpha-1-diphosphoundecaprenol 2-beta-glucuronyltransferase (2.4.1.264)
C12Y 204/01265	..	Dol-P-Glc:Glc1Man9GlcNAc2-PP-Dol alpha-1->3-glucosyltransferase (2.4.1.265)
C12Y 204/01266	..	Glucosyl-3-phosphoglycerate synthase (2.4.1.266)
C12Y 204/01267	..	Dol-P-Glc:Man9GlcNAc2-PP-Dol alpha-1->3-glucosyltransferase (2.4.1.267)
C12Y 204/01268	..	Glucosylglycerate synthase (2.4.1.268)



C12Y 204/01269	..	Mannosylglycerate synthase (2.4.1.269)
C12Y 204/0127	..	Mannosylglucosyl-3-phosphoglycerate synthase (2.4.1.270)
C12Y 204/01271	..	Crocetin glucosyltransferase (2.4.1.271)
C12Y 204/01272	..	Soyasapogenol B glucuronide galactosyltransferase (2.4.1.272)
C12Y 204/01273	..	Soyasaponin III rhamnosyltransferase (2.4.1.273)
C12Y 204/01274	..	Glucosylceramide beta-1,4-galactosyltransferase (2.4.1.274)
C12Y 204/01275	..	Lactotriaosylceramide beta-1,4-galactosyltransferase (2.4.1.275)
C12Y 204/01276	..	Zeaxanthin glucosyltransferase (2.4.1.276)
C12Y 204/01277	..	Glycosyltransferase DesVII (2.4.1.277)
C12Y 204/02	.	Pentosyltransferases (2.4.2)
C12Y 204/02001	..	Purine-nucleoside phosphorylase (2.4.2.1)
C12Y 204/02002	..	Pyrimidine-nucleoside phosphorylase (2.4.2.2)
C12Y 204/02003	..	Uridine phosphorylase (2.4.2.3)
C12Y 204/02004	..	Thymidine phosphorylase (2.4.2.4)
C12Y 204/02005	..	Nucleoside ribosyltransferase (2.4.2.5)
C12Y 204/02006	..	Nucleoside deoxyribosyltransferase (2.4.2.6)
C12Y 204/02007	..	Adenine phosphoribosyltransferase (2.4.2.7)
C12Y 204/02008	..	Hypoxanthine phosphoribosyltransferase (2.4.2.8)
C12Y 204/02009	..	Uracil phosphoribosyltransferase (2.4.2.9)
C12Y 204/0201	..	Orotate phosphoribosyltransferase (2.4.2.10)
C12Y 204/02011	..	Nicotinate phosphoribosyltransferase (2.4.2.11)
C12Y 204/02012	..	Nicotinamide phosphoribosyltransferase (2.4.2.12), i.e. visfatin
C12Y 204/02014	..	Amidophosphoribosyltransferase (2.4.2.14)
C12Y 204/02015	..	Guanosine phosphorylase (2.4.2.15)
C12Y 204/02016	..	Urate-ribonucleotide phosphorylase (2.4.2.16)
C12Y 204/02017	..	ATP phosphoribosyltransferase (2.4.2.17)
C12Y 204/02018	..	Anthranilate phosphoribosyltransferase (2.4.2.18)
C12Y 204/02019	..	Nicotinate-nucleotide diphosphorylase (carboxylating) (2.4.2.19)
C12Y 204/0202	..	Dioxotetrahydropyrimidine phosphoribosyltransferase (2.4.2.20)
C12Y 204/02021	..	Nicotinate-nucleotide--dimethylbenzimidazole phosphoribosyltransferase (2.4.2.21)
C12Y 204/02022	..	Xanthine phosphoribosyltransferase (2.4.2.22)
C12Y 204/02023	..	Deoxyuridine phosphorylase (2.4.2.23)
C12Y 204/02024	..	1,4-Beta-D-xylan synthase (2.4.2.24)
C12Y 204/02025	..	Flavone apiosyltransferase (2.4.2.25)
C12Y 204/02026	..	Protein xylosyltransferase (2.4.2.26)
C12Y 204/02027	..	dTDP-dihydrostreptose--streptidine-6-phosphate dihydrostreptosyltransferase (2.4.2.27)
C12Y 204/02028	..	S-Methyl-5'-thioadenosine phosphorylase (2.4.2.28)
C12Y 204/02029	..	tRNA-guanine transglycosylase (2.4.2.29)

C12Y 204/0203	..	NAD <sup>+</sup> ADP-ribosyltransferase (2.4.2.30), i.e. tankyrase or poly(ADP-ribose) polymerase
C12Y 204/02031	..	NAD <sup>+</sup> -protein-arginine ADP-ribosyltransferase (2.4.2.31)
C12Y 204/02032	..	Dolichyl-phosphate D-xylosyltransferase (2.4.2.32)
C12Y 204/02033	..	Dolichyl-xylosyl-phosphate--protein xylosyltransferase (2.4.2.33)
C12Y 204/02034	..	Indolylacetylinoitol arabinosyltransferase (2.4.2.34)
C12Y 204/02035	..	Flavonol-3-O-glycoside xylosyltransferase (2.4.2.35)
C12Y 204/02036	..	NAD(+)--diphthamide ADP-ribosyltransferase (2.4.2.36)
C12Y 204/02037	..	NAD(+)--dinitrogen-reductase ADP-D-ribosyltransferase (2.4.2.37)
C12Y 204/02038	..	Glycoprotein 2-beta-D-xylosyltransferase (2.4.2.38)
C12Y 204/02039	..	Xyloglucan 6-xylosyltransferase (2.4.2.39)
C12Y 204/0204	..	Zeatin O-beta-D-xylosyltransferase (2.4.2.40)
C12Y 204/02041	..	Xylogalacturonan beta-1,3-xylosyltransferase (2.4.2.41)
C12Y 204/02042	..	UDP-D-xylose:beta-D-glucoside alpha-1,3-D-xylosyltransferase (2.4.2.42)
C12Y 204/02043	..	Lipid IVA 4-amino-4-deoxy-L-arabinosyltransferase (2.4.2.43)
C12Y 204/02044	..	S-Methyl-5'-thioinosine phosphorylase (2.4.2.44)
C12Y 204/99	.	transferring other glycosyl groups (2.4.99)
C12Y 204/99001	..	Beta-galactoside alpha-2,6-sialyltransferase (2.4.99.1)
C12Y 204/99002	..	Monosialoganglioside sialyltransferase (2.4.99.2)
C12Y 204/99003	..	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase (2.4.99.3)
C12Y 204/99004	..	Beta-galactoside alpha-2,3-sialyltransferase (2.4.99.4)
C12Y 204/99005	..	Galactosyldiacylglycerol alpha-2,3-sialyltransferase (2.4.99.5)
C12Y 204/99006	..	N-Acetyllactosaminide alpha-2,3-sialyltransferase (2.4.99.6)
C12Y 204/99007	..	Alpha-N-acetylneuraminy-2,3-beta-galactosyl-1,3-N-acetylgalactosaminide 6-alpha-sialyltransferase (2.4.99.7)
C12Y 204/99008	..	Alpha-N-acetylneuraminate alpha-2,8-sialyltransferase (2.4.99.8)
C12Y 204/99009	..	Lactosylceramide alpha-2,3-sialyltransferase (2.4.99.9)
C12Y 204/9901	..	Neolactotetraosylceramide alpha-2,3-sialyltransferase (2.4.99.10)
C12Y 204/99011	..	Lactosylceramide alpha-2,6-N-sialyltransferase (2.4.99.11)
C12Y 204/99012	..	Lipid IVA 3-deoxy-D-manno-octulosonic acid transferase (2.4.99.12)
C12Y 204/99013	..	(KDO)-lipid IVA 3-deoxy-D-manno-octulosonic acid transferase (2.4.99.13)
C12Y 204/99014	..	(KDO)2-lipid IVA (2-8) 3-deoxy-D-manno-octulosonic acid transferase (2.4.99.14)
C12Y 204/99015	..	(KDO)3-lipid IVA (2-4) 3-deoxy-D-manno-octulosonic acid transferase (2.4.99.15)

## **C12Y 205/00      Transferases transferring alkyl or aryl groups, other than methyl groups (2.5)**

C12Y 205/01	.	transferring alkyl or aryl groups, other than methyl groups (2.5.1)
C12Y 205/01001	..	Dimethylallyltranstransferase (2.5.1.1)
C12Y 205/01002	..	Thiamine pyridinylase (2.5.1.2)
C12Y 205/01003	..	Thiamine-phosphate diphosphorylase (2.5.1.3)

C12Y 205/01004	..	Adenosylmethionine cyclotransferase (2.5.1.4)
C12Y 205/01005	..	Galactose-6-sulfurylase (2.5.1.5)
C12Y 205/01006	..	Methionine adenosyltransferase (2.5.1.6), i.e. adenosylmethionine synthetase
C12Y 205/01007	..	UDP-N-acetylglucosamine 1-carboxyvinyltransferase (2.5.1.7)
C12Y 205/01009	..	Riboflavin synthase (2.5.1.9)
C12Y 205/0101	..	(2E,6E)-Farnesyl diphosphate synthase (2.5.1.10), i.e. geranyltranstransferase
C12Y 205/01011	..	Trans-octaprenyltranstransferase (2.5.1.11) ( <a href="#">C12Y 205/01084</a> , <a href="#">C12Y 205/01085</a> take precedence )
C12Y 205/01015	..	Dihydropteroate synthase (2.5.1.15)
C12Y 205/01016	..	Spermidine synthase (2.5.1.16)
C12Y 205/01017	..	Cob(I)yrinic acid a,c-diamide adenosyltransferase (2.5.1.17)
C12Y 205/01018	..	Glutathione transferase (2.5.1.18)
C12Y 205/01019	..	3-Phosphoshikimate 1-carboxyvinyltransferase (2.5.1.19), i.e. 5-enolpyruvylshikimate-3-phosphate synthase
C12Y 205/0102	..	Rubber cis-polyisoprenylcistransferase (2.5.1.20)
C12Y 205/01021	..	Squalene synthase (2.5.1.21), i.e. farnesyl-diphosphate farnesyltransferase
C12Y 205/01022	..	Spermine synthase (2.5.1.22)
C12Y 205/01023	..	Sym-norspermidine synthase (2.5.1.23)
C12Y 205/01024	..	Discadenine synthase (2.5.1.24)
C12Y 205/01025	..	tRNA-uridine aminocarboxypropyltransferase (2.5.1.25)
C12Y 205/01026	..	Alkylglycerone-phosphate synthase (2.5.1.26)
C12Y 205/01027	..	Adenylate dimethylallyltransferase (2.5.1.27)
C12Y 205/01028	..	Dimethylallylcistransferase (2.5.1.28)
C12Y 205/01029	..	Geranylgeranyl diphosphate synthase (2.5.1.29)
C12Y 205/0103	..	Heptaprenyl diphosphate synthase (2.5.1.30)
C12Y 205/01031	..	Ditrans,polycis-undecaprenyl-diphosphate synthase [(2E,6E)-farnesyl-diphosphate specific] (2.5.1.31)
C12Y 205/01032	..	Phytoene synthase (2.5.1.32)
C12Y 205/01033	..	Trans-pentaprenyltranstransferase (2.5.1.33) ( <a href="#">C12Y 205/01082</a> , <a href="#">C12Y 205/01083</a> take precedence )
C12Y 205/01034	..	4-Dimethylallyltryptophan synthase (2.5.1.34)
C12Y 205/01035	..	Aspulinone dimethylallyltransferase (2.5.1.35)
C12Y 205/01036	..	Trihydroxypterocarpan dimethylallyltransferase (2.5.1.36)
C12Y 205/01038	..	Isonocardicin synthase (2.5.1.38)
C12Y 205/01039	..	4-Hydroxybenzoate polyisoprenyltransferase (2.5.1.39)
C12Y 205/01041	..	Phosphoglycerol geranylgeranyltransferase (2.5.1.41)
C12Y 205/01042	..	Geranylgeranylglycerol-phosphate geranylgeranyltransferase (2.5.1.42)
C12Y 205/01043	..	Nicotianamine synthase (2.5.1.43)
C12Y 205/01044	..	Homospermidine synthase (2.5.1.44)
C12Y 205/01045	..	Homospermidine synthase (spermidine-specific) (2.5.1.45)
C12Y 205/01046	..	Deoxyhypusine synthase (2.5.1.46)

C12Y 205/01047	..	Cysteine synthase (2.5.1.47)
C12Y 205/01048	..	Cystathionine gamma-synthase (2.5.1.48)
C12Y 205/01049	..	O-acetylhomoserine aminocarboxypropyltransferase (2.5.1.49)
C12Y 205/0105	..	Zeatin 9-aminocarboxyethyltransferase (2.5.1.50)
C12Y 205/01051	..	Beta-pyrazolylalanine synthase (2.5.1.51)
C12Y 205/01052	..	L-Mimosine synthase (2.5.1.52)
C12Y 205/01053	..	Uracilylalanine synthase (2.5.1.53)
C12Y 205/01054	..	3-Deoxy-7-phosphoheptulonate synthase (2.5.1.54)
C12Y 205/01055	..	3-Deoxy-8-phosphooctulonate synthase (2.5.1.55)
C12Y 205/01056	..	N-acetylneuraminate synthase (2.5.1.56)
C12Y 205/01057	..	N-Acylneuraminate-9-phosphate synthase (2.5.1.57)
C12Y 205/01058	..	Protein farnesyltransferase (2.5.1.58)
C12Y 205/01059	..	Protein geranylgeranyltransferase type I (2.5.1.59)
C12Y 205/0106	..	Protein geranylgeranyltransferase type II (2.5.1.60)
C12Y 205/01061	..	Hydroxymethylbilane synthase (2.5.1.61)
C12Y 205/01062	..	Chlorophyll synthase (2.5.1.62)
C12Y 205/01063	..	Adenosyl-fluoride synthase (2.5.1.63)
C12Y 205/01064	..	2-Succinyl-6-hydroxy-2,4-cyclohexadiene-1-carboxylate synthase (2.5.1.64) ( <a href="#">C12Y 202/01009</a> , <a href="#">C12Y 402/9902</a> take precedence )
C12Y 205/01065	..	O-Phosphoserine sulfhydrylase (2.5.1.65)
C12Y 205/01066	..	N <sup>2</sup> -(2-Carboxyethyl)arginine synthase (2.5.1.66)
C12Y 205/01067	..	Chrysanthemyl diphosphate synthase (2.5.1.67)
C12Y 205/01068	..	(2Z,6E)-Farnesyl diphosphate synthase (2.5.1.68)
C12Y 205/01069	..	Lavandulyl diphosphate synthase (2.5.1.69)
C12Y 205/0107	..	Naringenin 8-dimethylallyltransferase (2.5.1.70)
C12Y 205/01071	..	Leachianone-G 2''-dimethylallyltransferase (2.5.1.71)
C12Y 205/01072	..	Quinolinate synthase (2.5.1.72)
C12Y 205/01073	..	O-Phospho-L-seryl-tRNA:Cys-tRNA synthase (2.5.1.73)
C12Y 205/01074	..	1,4-Dihydroxy-2-naphthoate polyprenyltransferase (2.5.1.74)
C12Y 205/01075	..	tRNA dimethylallyltransferase (2.5.1.75)
C12Y 205/01076	..	Cysteate synthase (2.5.1.76)
C12Y 205/01077	..	7,8-Didemethyl-8-hydroxy-5-deazariboflavin synthase (2.5.1.77)
C12Y 205/01078	..	6,7-Dimethyl-8-ribityllumazine synthase (2.5.1.78)
C12Y 205/01079	..	Thermospermine synthase (2.5.1.79)
C12Y 205/0108	..	7-Dimethylallyltryptophan synthase (2.5.1.80)
C12Y 205/01081	..	Geranylarnesyl diphosphate synthase (2.5.1.81)
C12Y 205/01082	..	Hexaprenyl diphosphate synthase ( <a href="#">geranylgeranyl-diphosphate specific</a> )(2.5.1.82)
C12Y 205/01083	..	Hexaprenyl-diphosphate synthase ( <a href="#">((2E,6E)-farnesyl-diphosphate specific</a> )(2.5.1.83)
C12Y 205/01084	..	All-trans-nonaprenyl-diphosphate synthase ( <a href="#">geranyl-diphosphate specific</a> )(2.5.1.84)

C12Y 205/01085	..	All-trans-nonaprenyl-diphosphate synthase ( <a href="#">geranylgeranyl-diphosphate specific</a> )(2.5.1.85)
C12Y 205/01086	..	Trans,polycis-decaprenyl diphosphate synthase (2.5.1.86)
C12Y 205/01087	..	Ditrans,polycis-polyprenyl diphosphate synthase ( <a href="#">((2E,6E)-farnesyl diphosphate specific)</a> )(2.5.1.87)
C12Y 205/01088	..	Trans,polycis-polyprenyl diphosphate synthase ( <a href="#">((2Z,6E)-farnesyl diphosphate specific)</a> )(2.5.1.88)
C12Y 205/01089	..	Tritrans,polycis-undecaprenyl-diphosphate synthase ( <a href="#">geranylgeranyl-diphosphate specific</a> )(2.5.1.89)
C12Y 205/0109	..	All-trans-octaprenyl-diphosphate synthase (2.5.1.90)
C12Y 205/01091	..	All-trans-decaprenyl-diphosphate synthase (2.5.1.91)
C12Y 205/01092	..	(2Z,6Z)-Farnesyl diphosphate synthase (2.5.1.92)
C12Y 205/01093	..	4-Hydroxybenzoate geranyltransferase (2.5.1.93)
C12Y 205/01094	..	Adenosyl-chloride synthase (2.5.1.94)
C12Y 205/01095	..	Ketal pyruvate transferase (2.5.1.95)
C12Y 205/01096	..	4,4'-diapophytoene synthase (2.5.1.96)
C12Y 205/01097	..	Pseudaminic acid synthase (2.5.1.97)

#### **C12Y 206/00      Transferases transferring nitrogenous groups (2.6)**

C12Y 206/01	.	Transaminases (2.6.1)
C12Y 206/01001	..	Aspartate transaminase (2.6.1.1), i.e. aspartate-aminotransferase
C12Y 206/01002	..	Alanine transaminase (2.6.1.2), i.e. alanine-aminotransferase
C12Y 206/01003	..	Cysteine transaminase (2.6.1.3)
C12Y 206/01004	..	Glycine transaminase (2.6.1.4)
C12Y 206/01005	..	Tyrosine transaminase (2.6.1.5)
C12Y 206/01006	..	Leucine transaminase (2.6.1.6)
C12Y 206/01007	..	Kynurenine--oxoglutarate transaminase (2.6.1.7)
C12Y 206/01008	..	2,5-Diaminovalerate transaminase (2.6.1.8)
C12Y 206/01009	..	Histidinol-phosphate transaminase (2.6.1.9)
C12Y 206/01011	..	Acetylornithine transaminase (2.6.1.11)
C12Y 206/01012	..	Alanine--oxo-acid transaminase (2.6.1.12)
C12Y 206/01013	..	Ornithine aminotransferase (2.6.1.13)
C12Y 206/01014	..	Asparagine--oxo-acid transaminase (2.6.1.14)
C12Y 206/01015	..	Glutamine--pyruvate transaminase (2.6.1.15)
C12Y 206/01016	..	Glutamine-fructose-6-phosphate transaminase (isomerizing) (2.6.1.16), i.e. glucosamine-6-phosphate-synthase
C12Y 206/01017	..	Succinyldiaminopimelate transaminase (2.6.1.17)
C12Y 206/01018	..	Beta-alanine-pyruvate transaminase (2.6.1.18)
C12Y 206/01019	..	4-Aminobutyrate transaminase (2.6.1.19)
C12Y 206/01021	..	D-Amino-acid transaminase (2.6.1.21), i.e. D-alanine aminotransferase/ transaminase or D-aspartic aminotransferase/transaminase

C12Y 206/01022	..	(S)-3-Amino-2-methylpropionate transaminase (2.6.1.22)
C12Y 206/01023	..	4-Hydroxyglutamate transaminase (2.6.1.23)
C12Y 206/01024	..	Diiodotyrosine transaminase (2.6.1.24)
C12Y 206/01026	..	Thyroid-hormone transaminase (2.6.1.26)
C12Y 206/01027	..	Tryptophan transaminase (2.6.1.27)
C12Y 206/01028	..	Tryptophan--phenylpyruvate transaminase (2.6.1.28)
C12Y 206/01029	..	Diamine transaminase (2.6.1.29)
C12Y 206/0103	..	Pyridoxamine--pyruvate transaminase (2.6.1.30)
C12Y 206/01031	..	Pyridoxamine--oxaloacetate transaminase (2.6.1.31)
C12Y 206/01032	..	Valine--3-methyl-2-oxovalerate transaminase (2.6.1.32)
C12Y 206/01033	..	dTDP-4-amino-4,6-dideoxy-D-glucose transaminase (2.6.1.33)
C12Y 206/01034	..	UDP-2-acetamido-4-amino-2,4,6-trideoxyglucose transaminase (2.6.1.34)
C12Y 206/01035	..	Glycine--oxaloacetate transaminase (2.6.1.35)
C12Y 206/01036	..	L-Lysine 6-transaminase (2.6.1.36)
C12Y 206/01037	..	2-Aminoethylphosphonate--pyruvate transaminase (2.6.1.37)
C12Y 206/01038	..	Histidine transaminase (2.6.1.38)
C12Y 206/01039	..	2-Aminoadipate transaminase (2.6.1.39)
C12Y 206/0104	..	(R)-3-Amino-2-methylpropionate--pyruvate transaminase (2.6.1.40)
C12Y 206/01041	..	D-Methionine--pyruvate transaminase (2.6.1.41)
C12Y 206/01042	..	Branched-chain-amino-acid transaminase (2.6.1.42)
C12Y 206/01043	..	Aminolevulinate transaminase (2.6.1.43)
C12Y 206/01044	..	Alanine--glyoxylate transaminase (2.6.1.44)
C12Y 206/01045	..	Serine--glyoxylate transaminase (2.6.1.45)
C12Y 206/01046	..	Diaminobutyrate--pyruvate transaminase (2.6.1.46)
C12Y 206/01047	..	Alanine--oxomalonate transaminase (2.6.1.47)
C12Y 206/01048	..	5-Aminovalerate transaminase (2.6.1.48)
C12Y 206/01049	..	Dihydroxyphenylalanine transaminase (2.6.1.49)
C12Y 206/0105	..	Glutamine--scyllo-inositol transaminase (2.6.1.50)
C12Y 206/01051	..	Serine--pyruvate transaminase (2.6.1.51)
C12Y 206/01052	..	Phosphoserine transaminase (2.6.1.52)
C12Y 206/01054	..	Pyridoxamine-phosphate transaminase (2.6.1.54)
C12Y 206/01055	..	Taurine--2-oxoglutarate transaminase (2.6.1.55)
C12Y 206/01056	..	1D-1-Guanidino-3-amino-1,3-dideoxy-scyllo-inositol transaminase (2.6.1.56)
C12Y 206/01057	..	Aromatic-amino-acid transaminase (2.6.1.57)
C12Y 206/01058	..	Phenylalanine(histidine) transaminase (2.6.1.58)
C12Y 206/01059	..	dTDP-4-amino-4,6-dideoxygalactose transaminase (2.6.1.59)
C12Y 206/0106	..	Aromatic-amino-acid--glyoxylate transaminase (2.6.1.60)
C12Y 206/01062	..	Adenosylmethionine--8-amino-7-oxononanoate transaminase (2.6.1.62)
C12Y 206/01063	..	Kynurenine--glyoxylate transaminase (2.6.1.63)
C12Y 206/01064	..	Glutamine-phenylpyruvate transaminase (2.6.1.64)



C12Y 206/01065	..	N6-Acetyl-beta-lysine transaminase (2.6.1.65)
C12Y 206/01066	..	Valine--pyruvate transaminase (2.6.1.66)
C12Y 206/01067	..	2-Aminohexanoate transaminase (2.6.1.67)
C12Y 206/01068	..	Ornithine(lysine) transaminase (2.6.1.68)
C12Y 206/0107	..	Aspartate--phenylpyruvate transaminase (2.6.1.70)
C12Y 206/01071	..	Lysine--pyruvate 6-transaminase (2.6.1.71)
C12Y 206/01072	..	D-4-Hydroxyphenylglycine transaminase (2.6.1.72)
C12Y 206/01073	..	Methionine--glyoxylate transaminase (2.6.1.73)
C12Y 206/01074	..	Cephalosporin-C transaminase (2.6.1.74)
C12Y 206/01075	..	Cysteine-conjugate transaminase (2.6.1.75)
C12Y 206/01076	..	Diaminobutyrate--2-oxoglutarate transaminase (2.6.1.76)
C12Y 206/01077	..	Taurine--pyruvate aminotransferase (2.6.1.77)
C12Y 206/01078	..	Aspartate--prephenate aminotransferase (2.6.1.78)
C12Y 206/01079	..	Glutamate--prephenate aminotransferase (2.6.1.79)
C12Y 206/0108	..	Nicotianamine aminotransferase (2.6.1.80)
C12Y 206/01081	..	Succinylornithine transaminase (2.6.1.81)
C12Y 206/01082	..	Putrescine aminotransferase (2.6.1.82)
C12Y 206/01083	..	LL-Diaminopimelate aminotransferase (2.6.1.83)
C12Y 206/01084	..	Arginine--pyruvate transaminase (2.6.1.84)
C12Y 206/01085	..	Aminodeoxychorismate synthase (2.6.1.85)
C12Y 206/01086	..	2-Amino-4-deoxychorismate synthase (2.6.1.86)
C12Y 206/01087	..	UDP-4-amino-4-deoxy-L-arabinose aminotransferase (2.6.1.87)
C12Y 206/01088	..	Methionine transaminase (2.6.1.88)
C12Y 206/01089	..	dTDP-3-amino-3,6-dideoxy-alpha-D-glucopyranose transaminase (2.6.1.89)
C12Y 206/0109	..	dTDP-3-amino-3,6-dideoxy-alpha-D-galactopyranose transaminase (2.6.1.90)
C12Y 206/01091	..	UDP-4-amino-4,6-dideoxy-alpha-D-N-acetyl-D-glucosamine transaminase (2.6.1.91)
C12Y 206/01092	..	UDP-4-amino-4,6-dideoxy-L-N-acetyl-beta-L-altrosamine transaminase (2.6.1.92)
C12Y 206/03	.	Oximinotransferases (2.6.3)
C12Y 206/03001	..	Oximinotransferase (2.6.3.1)
C12Y 206/99	.	transferring other nitrogenous groups (2.6.99)
C12Y 206/99001	..	dATP(dGTP)--DNA purinettransferase (2.6.99.1)
C12Y 206/99002	..	Pyridoxine 5'-phosphate synthase (2.6.99.2)
<b>C12Y 207/00</b>		<b>Transferases transferring phosphorus-containing groups (2.7)</b>
C12Y 207/01	.	Phosphotransferases with an alcohol group as acceptor (2.7.1)
C12Y 207/01001	..	Hexokinase (2.7.1.1)
C12Y 207/01002	..	Glucokinase (2.7.1.2)



C12Y 207/01003	..	Ketohexokinase (2.7.1.3)
C12Y 207/01004	..	Fructokinase (2.7.1.4)
C12Y 207/01005	..	Rhamnulokinase (2.7.1.5)
C12Y 207/01006	..	Galactokinase (2.7.1.6)
C12Y 207/01007	..	Mannokinase (2.7.1.7)
C12Y 207/01008	..	Glucosamine kinase (2.7.1.8)
C12Y 207/0101	..	Phosphoglucokinase (2.7.1.10)
C12Y 207/01011	..	6-Phosphofructokinase (2.7.1.11)
C12Y 207/01012	..	Gluconokinase (2.7.1.12)
C12Y 207/01013	..	Dehydrogluconokinase (2.7.1.13)
C12Y 207/01014	..	Sedoheptulokinase (2.7.1.14)
C12Y 207/01015	..	Ribokinase (2.7.1.15)
C12Y 207/01016	..	Ribulokinase (2.7.1.16)
C12Y 207/01017	..	Xylulokinase (2.7.1.17)
C12Y 207/01018	..	Phosphoribokinase (2.7.1.18)
C12Y 207/01019	..	Phosphoribulokinase (2.7.1.19)
C12Y 207/0102	..	Adenosine kinase (2.7.1.20)
C12Y 207/01021	..	Thymidine kinase (2.7.1.21)
C12Y 207/01022	..	Ribosylnicotinamide kinase (2.7.1.22)
C12Y 207/01023	..	NAD <sup>+</sup> kinase (2.7.1.23)
C12Y 207/01024	..	Dephospho-CoA kinase (2.7.1.24)
C12Y 207/01025	..	Adenylyl-sulfate kinase (2.7.1.25)
C12Y 207/01026	..	Riboflavin kinase (2.7.1.26)
C12Y 207/01027	..	Erythritol kinase (2.7.1.27)
C12Y 207/01028	..	Triokinase (2.7.1.28)
C12Y 207/01029	..	Glycerone kinase (2.7.1.29), i.e. dihydroxyacetone kinase
C12Y 207/0103	..	Glycerol kinase (2.7.1.30)
C12Y 207/01031	..	Glycerate kinase (2.7.1.31)
C12Y 207/01032	..	Choline kinase (2.7.1.32)
C12Y 207/01033	..	Pantothenate kinase (2.7.1.33)
C12Y 207/01034	..	Pantetheine kinase (2.7.1.34)
C12Y 207/01035	..	Pyridoxal kinase (2.7.1.35)
C12Y 207/01036	..	Mevalonate kinase (2.7.1.36)
C12Y 207/01037	..	Protein kinase ( <a href="#">2.7.1.37</a> ) ( <a href="#">C12Y 207/11001</a> , <a href="#">C12Y 207/11008</a> - <a href="#">C12Y 207/11013</a> , <a href="#">C12Y 207/11021</a> , <a href="#">C12Y 207/11022</a> , <a href="#">C12Y 207/11024</a> , <a href="#">C12Y 207/11025</a> , <a href="#">C12Y 207/1103</a> or <a href="#">C12Y 207/12001</a> takes precedence )
C12Y 207/01039	..	Homoserine kinase (2.7.1.39)
C12Y 207/0104	..	Pyruvate kinase (2.7.1.40)
C12Y 207/01041	..	Glucose-1-phosphate phosphodismutase (2.7.1.41)
C12Y 207/01042	..	Riboflavin phosphotransferase (2.7.1.42)

C12Y 207/01043	..	Glucuronokinase (2.7.1.43)
C12Y 207/01044	..	Galacturonokinase (2.7.1.44)
C12Y 207/01045	..	2-Dehydro-3-deoxygluconokinase (2.7.1.45)
C12Y 207/01046	..	L-Arabinokinase (2.7.1.46)
C12Y 207/01047	..	D-Ribulokinase (2.7.1.47)
C12Y 207/01048	..	Uridine kinase (2.7.1.48)
C12Y 207/01049	..	Hydroxymethylpyrimidine kinase (2.7.1.49)
C12Y 207/0105	..	Hydroxyethylthiazole kinase (2.7.1.50)
C12Y 207/01051	..	L-Fuculokinase (2.7.1.51)
C12Y 207/01052	..	Fucokinase (2.7.1.52)
C12Y 207/01053	..	L-Xylulokinase (2.7.1.53)
C12Y 207/01054	..	D-Arabinokinase (2.7.1.54)
C12Y 207/01055	..	Allose kinase (2.7.1.55)
C12Y 207/01056	..	1-Phosphofructokinase (2.7.1.56)
C12Y 207/01058	..	2-Dehydro-3-deoxygalactonokinase (2.7.1.58)
C12Y 207/01059	..	N-Acetylglucosamine kinase (2.7.1.59)
C12Y 207/0106	..	N-Acylmannosamine kinase (2.7.1.60)
C12Y 207/01061	..	Acyl-phosphate--hexose phosphotransferase (2.7.1.61)
C12Y 207/01062	..	Phosphoramidate--hexose phosphotransferase (2.7.1.62)
C12Y 207/01063	..	Polyphosphate--glucose phosphotransferase (2.7.1.63)
C12Y 207/01064	..	Inositol 3-kinase (2.7.1.64)
C12Y 207/01065	..	Scyllo-inosamine 4-kinase (2.7.1.65)
C12Y 207/01066	..	Undecaprenol kinase (2.7.1.66)
C12Y 207/01067	..	1-Phosphatidylinositol 4-kinase (2.7.1.67)
C12Y 207/01068	..	1-Phosphatidylinositol-4-phosphate 5-kinase (2.7.1.68)
C12Y 207/01069	..	Protein-Npi-phosphohistidine-sugar phosphotransferase (2.7.1.69), i.e. sucrose phosphotransferase system II
C12Y 207/01071	..	Shikimate kinase (2.7.1.71)
C12Y 207/01072	..	Streptomycin 6-kinase (2.7.1.72)
C12Y 207/01073	..	Inosine kinase (2.7.1.73)
C12Y 207/01074	..	Deoxycytidine kinase (2.7.1.74)
C12Y 207/01076	..	Deoxyadenosine kinase (2.7.1.76)
C12Y 207/01077	..	Nucleoside phosphotransferase (2.7.1.77)
C12Y 207/01078	..	Polynucleotide 5'-hydroxyl-kinase (2.7.1.78)
C12Y 207/01079	..	Diphosphate--glycerol phosphotransferase (2.7.1.79)
C12Y 207/0108	..	Diphosphate--serine phosphotransferase (2.7.1.80)
C12Y 207/01081	..	Hydroxylysine kinase (2.7.1.81)
C12Y 207/01082	..	Ethanolamine kinase (2.7.1.82)
C12Y 207/01083	..	Pseudouridine kinase (2.7.1.83)
C12Y 207/01084	..	Alkylglycerone kinase (2.7.1.84)

C12Y 207/01085	..	Beta-glucoside kinase (2.7.1.85)
C12Y 207/01086	..	NADH kinase (2.7.1.86)
C12Y 207/01087	..	Streptomycin 3''-kinase (2.7.1.87)
C12Y 207/01088	..	Dihydrostreptomycin-6-phosphate 3'-alpha-kinase (2.7.1.88)
C12Y 207/01089	..	Thiamine kinase (2.7.1.89)
C12Y 207/0109	..	Diphosphate--fructose-6-phosphate 1-phosphotransferase (2.7.1.90)
C12Y 207/01091	..	Sphinganine kinase (2.7.1.91)
C12Y 207/01092	..	5-Dehydro-2-deoxygluconokinase (2.7.1.92)
C12Y 207/01093	..	Alkylglycerol kinase (2.7.1.93)
C12Y 207/01094	..	Acylglycerol kinase (2.7.1.94)
C12Y 207/01095	..	Kanamycin kinase (2.7.1.95), i.e. neomycin-kanamycin phosphotransferase
C12Y 207/011	..	S-Methyl-5-thioribose kinase (2.7.1.100)
C12Y 207/01101	..	Tagatose kinase (2.7.1.101)
C12Y 207/01102	..	Hamamelose kinase (2.7.1.102)
C12Y 207/01103	..	Viomycin kinase (2.7.1.103)
C12Y 207/01105	..	6-Phosphofructo-2-kinase (2.7.1.105)
C12Y 207/01106	..	Glucose-1,6-bisphosphate synthase (2.7.1.106)
C12Y 207/01107	..	Diacylglycerol kinase (2.7.1.107)
C12Y 207/01108	..	Dolichol kinase (2.7.1.108)
C12Y 207/01112	..	Protein-tyrosine kinase (2.7.1.112) ( <a href="#">C12Y 207/10001</a> , <a href="#">C12Y 207/10002</a> take precedence )
C12Y 207/01113	..	Deoxyguanosine kinase (2.7.1.113)
C12Y 207/01114	..	AMP--thymidine kinase (2.7.1.114)
C12Y 207/01118	..	ADP--thymidine kinase (2.7.1.118)
C12Y 207/01119	..	Hygromycin-B 7''-O-kinase (2.7.1.119)
C12Y 207/01121	..	Phosphoenolpyruvate--glycerone phosphotransferase (2.7.1.121)
C12Y 207/01122	..	Xylitol kinase (2.7.1.122)
C12Y 207/01127	..	Inositol-trisphosphate 3-kinase (2.7.1.127)
C12Y 207/0113	..	Tetraacyldisaccharide 4'-kinase (2.7.1.130)
C12Y 207/01134	..	Inositol-tetrakisphosphate 1-kinase (2.7.1.134)
C12Y 207/01136	..	Macrolide 2'-kinase (2.7.1.136)
C12Y 207/01137	..	Phosphatidylinositol 3-kinase (2.7.1.137)
C12Y 207/01138	..	Ceramide kinase (2.7.1.138)
C12Y 207/0114	..	Inositol-tetrakisphosphate 5-kinase (2.7.1.140)
C12Y 207/01142	..	Glycerol-3-phosphate--glucose phosphotransferase (2.7.1.142)
C12Y 207/01143	..	Diphosphate-purine nucleoside kinase (2.7.1.143)
C12Y 207/01144	..	Tagatose-6-phosphate kinase (2.7.1.144)
C12Y 207/01145	..	Deoxynucleoside kinase (2.7.1.145)
C12Y 207/01146	..	ADP-specific phosphofructokinase (2.7.1.146)
C12Y 207/01147	..	ADP-specific glucokinase (2.7.1.147)

C12Y 207/01148	..	4- (Cytidine 5'-diphospho)-2-C-methyl-D-erythritol kinase (2.7.1.148)
C12Y 207/01149	..	1-Phosphatidylinositol-5-phosphate 4-kinase (2.7.1.149)
C12Y 207/0115	..	1-Phosphatidylinositol-3-phosphate 5-kinase (2.7.1.150)
C12Y 207/01151	..	Inositol-polyphosphate multikinase (2.7.1.151)
C12Y 207/01153	..	Phosphatidylinositol-4,5-bisphosphate 3-kinase (2.7.1.153), i.e. phosphoinositide 3-kinase
C12Y 207/01154	..	Phosphatidylinositol-4-phosphate 3-kinase (2.7.1.154)
C12Y 207/01156	..	Adenosylcobinamide kinase (2.7.1.156)
C12Y 207/01157	..	N-Acetylgalactosamine kinase (2.7.1.157)
C12Y 207/01158	..	Inositol-pentakisphosphate 2-kinase (2.7.1.158)
C12Y 207/01159	..	Inositol-1,3,4-trisphosphate 5/6-kinase (2.7.1.159)
C12Y 207/0116	..	2'-Phosphotransferase (2.7.1.160)
C12Y 207/01161	..	CTP-dependent riboflavin kinase (2.7.1.161)
C12Y 207/01162	..	N-Acetylhexosamine 1-kinase (2.7.1.162)
C12Y 207/01163	..	Hygromycin B 4-O-kinase (2.7.1.163)
C12Y 207/01164	..	O-Phosphoseryl-tRNA(Sec) kinase (2.7.1.164)
C12Y 207/01165	..	Glycerate 2-kinase (2.7.1.165)
C12Y 207/01166	..	3-Deoxy-D-manno-octulosonic acid kinase (2.7.1.166)
C12Y 207/01167	..	D-Glycero-beta-D-manno-heptose-7-phosphate kinase (2.7.1.167)
C12Y 207/01168	..	D-Glycero-alpha-D-manno-heptose-7-phosphate kinase (2.7.1.168)
C12Y 207/01169	..	Pantoate kinase (2.7.1.169)
C12Y 207/0117	..	Anhydro-N-acetylmuramic acid kinase (2.7.1.170)
C12Y 207/01171	..	Protein-fructosamine 3-kinase (2.7.1.171)
C12Y 207/01172	..	Protein-ribulosamine 3-kinase (2.7.1.172)
C12Y 207/02	.	Phosphotransferases with a carboxy group as acceptor (2.7.2)
C12Y 207/02001	..	Acetate kinase (2.7.2.1)
C12Y 207/02002	..	Carbamate kinase (2.7.2.2)
C12Y 207/02003	..	Phosphoglycerate kinase (2.7.2.3)
C12Y 207/02004	..	Aspartate kinase (2.7.2.4)
C12Y 207/02006	..	Formate kinase (2.7.2.6)
C12Y 207/02007	..	Butyrate kinase (2.7.2.7)
C12Y 207/02008	..	Acetylglutamate kinase (2.7.2.8)
C12Y 207/0201	..	Phosphoglycerate kinase (GTP) (2.7.2.10)
C12Y 207/02011	..	Glutamate 5-kinase (2.7.2.11)
C12Y 207/02012	..	Acetate kinase (diphosphate) (2.7.2.12)
C12Y 207/02013	..	Glutamate 1-kinase (2.7.2.13)
C12Y 207/02014	..	Branched-chain-fatty-acid kinase (2.7.2.14)
C12Y 207/02015	..	Propionate kinase (2.7.2.15)
C12Y 207/03	.	Phosphotransferases with a nitrogenous group as acceptor (2.7.3)

C12Y 207/03001	..	Guanidinoacetate kinase (2.7.3.1)
C12Y 207/03002	..	Creatine kinase (2.7.3.2)
C12Y 207/03003	..	Arginine kinase (2.7.3.3)
C12Y 207/03004	..	Taurocyamine kinase (2.7.3.4)
C12Y 207/03005	..	Lombricine kinase (2.7.3.5)
C12Y 207/03006	..	Hypotaurocyamine kinase (2.7.3.6)
C12Y 207/03007	..	Opheline kinase (2.7.3.7)
C12Y 207/03008	..	Ammonia kinase (2.7.3.8)
C12Y 207/03009	..	Phosphoenolpyruvate-protein phosphotransferase (2.7.3.9)
C12Y 207/0301	..	Agmatine kinase (2.7.3.10)
C12Y 207/04	.	Phosphotransferases with a phosphate group as acceptor (2.7.4)
C12Y 207/04001	..	Polyphosphate kinase (2.7.4.1)
C12Y 207/04002	..	Phosphomevalonate kinase (2.7.4.2)
C12Y 207/04003	..	Adenylate kinase (2.7.4.3)
C12Y 207/04004	..	Nucleoside-phosphate kinase (2.7.4.4)
C12Y 207/04006	..	Nucleoside-diphosphate kinase (2.7.4.6)
C12Y 207/04007	..	Phosphomethylpyrimidine kinase (2.7.4.7)
C12Y 207/04008	..	Guanylate kinase (2.7.4.8)
C12Y 207/04009	..	dTMP kinase (2.7.4.9)
C12Y 207/0401	..	Nucleoside-triphosphate--adenylate kinase (2.7.4.10)
C12Y 207/04011	..	(Deoxy)adenylate kinase (2.7.4.11)
C12Y 207/04012	..	T(2)-Induced deoxynucleotide kinase (2.7.4.12)
C12Y 207/04013	..	(Deoxy)nucleoside-phosphate kinase (2.7.4.13)
C12Y 207/04014	..	UMP/CMP kinase (2.7.4.14), i.e. uridine monophosphate kinase
C12Y 207/04015	..	Thiamine-diphosphate kinase (2.7.4.15)
C12Y 207/04016	..	Thiamine-phosphate kinase (2.7.4.16)
C12Y 207/04017	..	3-Phosphoglyceroyl-phosphate--polyphosphate phosphotransferase (2.7.4.17)
C12Y 207/04018	..	Farnesyl-diphosphate kinase (2.7.4.18)
C12Y 207/04019	..	5-Methyldeoxycytidine-5'-phosphate kinase (2.7.4.19)
C12Y 207/0402	..	Dolichyl-diphosphate--polyphosphate phosphotransferase (2.7.4.20)
C12Y 207/04021	..	Inositol-hexakisphosphate kinase (2.7.4.21)
C12Y 207/04022	..	UMP kinase (2.7.4.22)
C12Y 207/04023	..	Ribose 1,5-bisphosphate phosphokinase (2.7.4.23)
C12Y 207/04024	..	Diphosphoinositol-pentakisphosphate kinase (2.7.4.24)
C12Y 207/04025	..	(d)CMP kinase (2.7.4.25)
C12Y 207/06	.	Diphosphotransferases (2.7.6)
C12Y 207/06001	..	Ribose-phosphate diphosphokinase (2.7.6.1)
C12Y 207/06002	..	Thiamine diphosphokinase (2.7.6.2)
C12Y 207/06003	..	2-Amino-4-hydroxy-6-hydroxymethyldihydropteridine diphosphokinase (2.7.6.3)

C12Y 207/06004	..	Nucleotide diphosphokinase (2.7.6.4)
C12Y 207/06005	..	GTP diphosphokinase (2.7.6.5)
C12Y 207/07	.	Nucleotidyltransferases (2.7.7)
C12Y 207/07001	..	Nicotinamide-nucleotide adenylyltransferase (2.7.7.1)
C12Y 207/07002	..	FAD synthetase (2.7.7.2)
C12Y 207/07003	..	Pantetheine-phosphate adenylyltransferase (2.7.7.3)
C12Y 207/07004	..	Sulfate adenylyltransferase (2.7.7.4)
C12Y 207/07005	..	Sulfate adenylyltransferase (ADP) (2.7.7.5)
C12Y 207/07006	..	DNA-directed RNA polymerase (2.7.7.6)
C12Y 207/07007	..	DNA-directed DNA polymerase (2.7.7.7), i.e. DNA replicase
C12Y 207/07008	..	Polyribonucleotide nucleotidyltransferase (2.7.7.8), i.e. polynucleotide phosphorylase
C12Y 207/07009	..	UTP-glucose-1-phosphate uridylyltransferase (2.7.7.9), i.e. UDP-glucose-pyrophosphorylase
C12Y 207/0701	..	UTP--hexose-1-phosphate uridylyltransferase (2.7.7.10)
C12Y 207/07011	..	UTP--xylose-1-phosphate uridylyltransferase (2.7.7.11)
C12Y 207/07012	..	UDP-glucose--hexose-1-phosphate uridylyltransferase (2.7.7.12)
C12Y 207/07013	..	Mannose-1-phosphate guanylyltransferase (2.7.7.13)
C12Y 207/07014	..	Ethanolamine-phosphate cytidylyltransferase (2.7.7.14)
C12Y 207/07015	..	Choline-phosphate cytidylyltransferase (2.7.7.15)
C12Y 207/07018	..	Nicotinate-nucleotide adenylyltransferase (2.7.7.18)
C12Y 207/07019	..	Polynucleotide adenylyltransferase (2.7.7.19)
C12Y 207/07022	..	Mannose-1-phosphate guanylyltransferase (GDP) (2.7.7.22)
C12Y 207/07023	..	UDP-N-acetylglucosamine diphosphorylase (2.7.7.23)
C12Y 207/07024	..	Glucose-1-phosphate thymidylyltransferase (2.7.7.24)
C12Y 207/07027	..	Glucose-1-phosphate adenylyltransferase (2.7.7.27), i.e. ADP-glucose pyrophosphorylase
C12Y 207/07028	..	Nucleoside-triphosphate-aldose-1-phosphate nucleotidyltransferase (2.7.7.28)
C12Y 207/0703	..	Fucose-1-phosphate guanylyltransferase (2.7.7.30)
C12Y 207/07031	..	DNA nucleotidylexotransferase (2.7.7.31), i.e. terminal deoxynucleotidyl transferase
C12Y 207/07032	..	Galactose-1-phosphate thymidylyltransferase (2.7.7.32)
C12Y 207/07033	..	Glucose-1-phosphate cytidylyltransferase (2.7.7.33)
C12Y 207/07034	..	Glucose-1-phosphate guanylyltransferase (2.7.7.34)
C12Y 207/07035	..	Ribose-5-phosphate adenylyltransferase (2.7.7.35)
C12Y 207/07036	..	Aldose-1-phosphate adenylyltransferase (2.7.7.36)
C12Y 207/07037	..	Aldose-1-phosphate nucleotidyltransferase (2.7.7.37)
C12Y 207/07038	..	3-Deoxy-manno-octulosonate cytidylyltransferase (2.7.7.38)
C12Y 207/07039	..	Glycerol-3-phosphate cytidylyltransferase (2.7.7.39)
C12Y 207/0704	..	D-Ribitol-5-phosphate cytidylyltransferase (2.7.7.40)



C12Y 207/07041	..	Phosphatidate cytidyltransferase (2.7.7.41), i.e. CDP-diacylglycerol synthase
C12Y 207/07042	..	[Glutamate--ammonia-ligase adenylyltransferase (2.7.7.42)
C12Y 207/07043	..	N-Acylneuraminate cytidyltransferase (2.7.7.43)
C12Y 207/07044	..	Glucuronate-1-phosphate uridylyltransferase (2.7.7.44)
C12Y 207/07045	..	Guanosine-triphosphate guanylyltransferase (2.7.7.45)
C12Y 207/07046	..	Gentamicin 2"-nucleotidyltransferase (2.7.7.46)
C12Y 207/07047	..	Streptomycin 3"-adenylyltransferase (2.7.7.47)
C12Y 207/07048	..	RNA-directed RNA polymerase (2.7.7.48), i.e. RNA replicase
C12Y 207/07049	..	RNA-directed DNA polymerase (2.7.7.49), i.e. telomerase or reverse-transcriptase
C12Y 207/0705	..	mRNA guanylyltransferase (2.7.7.50)
C12Y 207/07051	..	Adenylylsulfate--ammonia adenylyltransferase (2.7.7.51)
C12Y 207/07052	..	RNA uridylyltransferase (2.7.7.52)
C12Y 207/07053	..	ATP adenylyltransferase (2.7.7.53)
C12Y 207/07054	..	Phenylalanine adenylyltransferase (2.7.7.54)
C12Y 207/07055	..	Anthranilate adenylyltransferase (2.7.7.55)
C12Y 207/07056	..	tRNA nucleotidyltransferase (2.7.7.56)
C12Y 207/07057	..	N-Methylphosphoethanolamine cytidyltransferase (2.7.7.57)
C12Y 207/07058	..	(2,3-Dihydroxybenzoyl)adenylate synthase (2.7.7.58)
C12Y 207/07059	..	[Protein-P <sub>II</sub> uridylyltransferase (2.7.7.59)
C12Y 207/0706	..	2-C-Methyl-D-erythritol 4-phosphate cytidyltransferase (2.7.7.60)
C12Y 207/07061	..	Citrate lyase holo-[acyl-carrier-protein synthase (2.7.7.61)
C12Y 207/07062	..	Adenosylcobinamide-phosphate guanylyltransferase (2.7.7.62)
C12Y 207/07063	..	Lipoate--protein ligase (2.7.7.63)
C12Y 207/07064	..	UTP-monosaccharide-1-phosphate uridylyltransferase (2.7.7.64)
C12Y 207/07065	..	Diguanylate cyclase (2.7.7.65)
C12Y 207/07066	..	Malonate decarboxylase holo-[acyl-carrier-protein synthase (2.7.7.66)
C12Y 207/07067	..	CDP-archaeol synthase (2.7.7.67)
C12Y 207/07068	..	2-Phospho-L-lactate guanylyltransferase (2.7.7.68)
C12Y 207/07069	..	GDP-L-galactose phosphorylase (2.7.7.69)
C12Y 207/0707	..	D-Glycero-beta-D-manno-heptose 1-phosphate adenylyltransferase (2.7.7.70)
C12Y 207/07071	..	D-Glycero-alpha-D-manno-heptose 1-phosphate guanylyltransferase (2.7.7.71)
C12Y 207/07072	..	CCA tRNA nucleotidyltransferase (2.7.7.72)
C12Y 207/07073	..	Sulfur carrier protein ThiS adenylyltransferase (2.7.7.73)
C12Y 207/07074	..	1L-Myo-inositol 1-phosphate cytidyltransferase (2.7.7.74)
C12Y 207/07075	..	Molybdopterin adenylyltransferase (2.7.7.75)
C12Y 207/07076	..	Molybdenum cofactor cytidyltransferase (2.7.7.76)
C12Y 207/07077	..	Molybdenum cofactor guanylyltransferase (2.7.7.77)
C12Y 207/07078	..	GDP-D-glucose phosphorylase (2.7.7.78)
C12Y 207/07079	..	tRNA(His) guanylyltransferase (2.7.7.79)
C12Y 207/0708	..	Molybdopterin-synthase adenylyltransferase (2.7.7.80)

C12Y 207/08	. Transferases for other substituted phosphate groups (2.7.8)
C12Y 207/08001	.. Ethanolaminephosphotransferase (2.7.8.1)
C12Y 207/08002	.. Diacylglycerol cholinephosphotransferase (2.7.8.2)
C12Y 207/08003	.. Ceramide cholinephosphotransferase (2.7.8.3)
C12Y 207/08004	.. Serine-phosphoethanolamine synthase (2.7.8.4)
C12Y 207/08005	.. CDP-diacylglycerol-glycerol-3-phosphate 3-phosphatidyltransferase (2.7.8.5)
C12Y 207/08006	.. Undecaprenyl-phosphate galactose phosphotransferase (2.7.8.6)
C12Y 207/08007	.. Holo-[acyl-carrier-protein synthase (2.7.8.7)
C12Y 207/08008	.. CDP-diacylglycerol--serine O-phosphatidyltransferase (2.7.8.8)
C12Y 207/08009	.. Phosphomannan mannosephosphotransferase (2.7.8.9)
C12Y 207/0801	.. Sphingosine cholinephosphotransferase (2.7.8.10)
C12Y 207/08011	.. CDP-diacylglycerol--inositol 3-phosphatidyltransferase (2.7.8.11)
C12Y 207/08012	.. CDP-glycerol glycerophosphotransferase (2.7.8.12)
C12Y 207/08013	.. Phospho-N-acetylmuramoyl-pentapeptide-transferase (2.7.8.13)
C12Y 207/08014	.. CDP-ribitol ribitolphosphotransferase (2.7.8.14)
C12Y 207/08015	.. UDP-N-acetylglucosamine--dolichyl-phosphate N-acetylglucosaminephosphotransferase (2.7.8.15)
C12Y 207/08017	.. UDP-N-acetylglucosamine--lysosomal-enzyme N-acetylglucosaminephosphotransferase (2.7.8.17)
C12Y 207/08018	.. UDP-galactose--UDP-N-acetylglucosamine galactose phosphotransferase (2.7.8.18)
C12Y 207/08019	.. UDP-glucose--glycoprotein glucose phosphotransferase (2.7.8.19)
C12Y 207/0802	.. Phosphatidylglycerol--membrane-oligosaccharide glycerophosphotransferase (2.7.8.20)
C12Y 207/08021	.. Membrane-oligosaccharide glycerophosphotransferase (2.7.8.21)
C12Y 207/08022	.. 1-Alkenyl-2-acylglycerol choline phosphotransferase (2.7.8.22)
C12Y 207/08023	.. Carboxyvinyl-carboxyphosphonate phosphorylmutase (2.7.8.23)
C12Y 207/08024	.. Phosphatidylcholine synthase (2.7.8.24)
C12Y 207/08025	.. Triphosphoribosyl-dephospho-CoA synthase (2.7.8.25)
C12Y 207/08026	.. Adenosylcobinamide-GDP ribazoletransferase (2.7.8.26)
C12Y 207/08027	.. Sphingomyelin synthase (2.7.8.27)
C12Y 207/08028	.. 2-Phospho-L-lactate transferase (2.7.8.28)
C12Y 207/08029	.. L-Serine-phosphatidylethanolamine phosphatidyltransferase (2.7.8.29)
C12Y 207/0803	.. Undecaprenyl-phosphate 4-deoxy-4-formamido-L-arabinose transferase (2.7.8.30)
C12Y 207/08031	.. Undecaprenyl-phosphate glucose phosphotransferase (2.7.8.31)
C12Y 207/08032	.. 3-O-Alpha-D-mannopyranosyl-alpha-D-mannopyranose xylosylphosphotransferase (2.7.8.32)
C12Y 207/08033	.. UDP-GlcNAc:undecaprenyl-phosphate GlcNAc-1-phosphate transferase (2.7.8.33)
C12Y 207/08034	.. CDP-L-myo-inositol myo-inositolphosphotransferase (2.7.8.34)
C12Y 207/09	. Phosphotransferases with paired acceptors (2.7.9)

C12Y 207/09001	..	Pyruvate, phosphate dikinase (2.7.9.1)
C12Y 207/09002	..	Pyruvate, water dikinase (2.7.9.2)
C12Y 207/09003	..	Selenide, water dikinase (2.7.9.3), i.e. selenophosphate-synthase
C12Y 207/09004	..	Alpha-glucan, water dikinase (2.7.9.4)
C12Y 207/09005	..	Phosphoglucan, water dikinase (2.7.9.5)
C12Y 207/10	.	Protein-tyrosine kinases (2.7.10)
C12Y 207/10001	..	Receptor protein-tyrosine kinase (2.7.10.1)
C12Y 207/10002	..	Non-specific protein-tyrosine kinase (2.7.10.2), i.e. spleen tyrosine kinase
C12Y 207/11	.	Protein-serine/threonine kinases (2.7.11)
C12Y 207/11001	..	Non-specific serine/threonine protein kinase (2.7.11.1), i.e. casein kinase or checkpoint kinase
C12Y 207/11002	..	[Pyruvate dehydrogenase (acetyl-transferring)] kinase (2.7.11.2)
C12Y 207/11003	..	Dephospho-[reductase kinase kinase (2.7.11.3)
C12Y 207/11004	..	[3-Methyl-2-oxobutanoate dehydrogenase (acetyl-transferring) kinase (2.7.11.4)
C12Y 207/11005	..	[Isocitrate dehydrogenase (NADP+) kinase (2.7.11.5)
C12Y 207/11006	..	[Tyrosine 3-monooxygenase kinase (2.7.11.6)
C12Y 207/11007	..	[Myosin-heavy-chain kinase (2.7.11.7)
C12Y 207/11008	..	Fas-activated serine/threonine kinase (2.7.11.8)
C12Y 207/11009	..	Goodpasture-antigen-binding protein kinase (2.7.11.9)
C12Y 207/1101	..	IkappaB kinase (2.7.11.10)
C12Y 207/11011	..	cAMP-dependent protein kinase (2.7.11.11)
C12Y 207/11012	..	cGMP-dependent protein kinase (2.7.11.12)
C12Y 207/11013	..	Protein kinase C (2.7.11.13)
C12Y 207/11014	..	Rhodopsin kinase (2.7.11.14)
C12Y 207/11015	..	[Beta-adrenergic-receptor kinase (2.7.11.15)
C12Y 207/11016	..	G-Protein-coupled receptor kinase (2.7.11.16)
C12Y 207/11017	..	Ca2+/Calmodulin-dependent protein kinase (2.7.11.17)
C12Y 207/11018	..	Myosin-light-chain kinase (2.7.11.18)
C12Y 207/11019	..	Phosphorylase kinase (2.7.11.19)
C12Y 207/1102	..	Elongation factor 2 kinase (2.7.11.20), i.e. eEF-2K
C12Y 207/11021	..	Polo kinase (2.7.11.21)
C12Y 207/11022	..	Cyclin-dependent kinase (2.7.11.22)
C12Y 207/11023	..	[RNA-polymerase-subunit kinase (2.7.11.23)
C12Y 207/11024	..	Mitogen-activated protein kinase (2.7.11.24), i.e. MAPK or MAPK2 or c-Jun N-terminal kinase
C12Y 207/11025	..	Mitogen-activated protein kinase kinase kinase (2.7.11.25), i.e. MAPKKK or MAP3K
C12Y 207/11026	..	Tau-protein kinase (2.7.11.26)
C12Y 207/11027	..	[Acetyl-CoA carboxylase kinase (2.7.11.27)
C12Y 207/11028	..	Tropomyosin kinase (2.7.11.28)

C12Y 207/11029	..	[Low-density-lipoprotein receptor kinase (2.7.11.29)
C12Y 207/1103	..	Receptor protein serine/threonine kinase (2.7.11.30)
C12Y 207/11031	..	[Hydroxymethylglutaryl-CoA reductase (NADPH) kinase (2.7.11.31)
C12Y 207/12	.	Dual-specificity kinases (2.7.12)
C12Y 207/12001	..	Dual-specificity kinase (2.7.12.1)
C12Y 207/12002	..	Mitogen-activated protein kinase kinase (2.7.12.2), i.e. MAPKK or MEK1 or MEK2
C12Y 207/13	.	Protein-histidine kinases (2.7.13)
C12Y 207/13001	..	Protein-histidine pros-kinase (2.7.13.1)
C12Y 207/13002	..	Protein-histidine tele-kinase (2.7.13.2)
C12Y 207/13003	..	Histidine kinase (2.7.13.3)
C12Y 207/99	.	Other protein kinases (2.7.99)
C12Y 207/99001	..	Triphosphate--protein phosphotransferase (2.7.99.1)

## **C12Y 208/00      Transferases transferring sulfur-containing groups (2.8)**

C12Y 208/01	.	Sulfurtransferases (2.8.1)
C12Y 208/01001	..	Thiosulfate sulfurtransferase (2.8.1.1)
C12Y 208/01002	..	3-Mercaptopyruvate sulfurtransferase (2.8.1.2)
C12Y 208/01003	..	Thiosulfate--thiol sulfurtransferase (2.8.1.3)
C12Y 208/01004	..	tRNA sulfurtransferase (2.8.1.4)
C12Y 208/01005	..	Thiosulfate--dithiol sulfurtransferase (2.8.1.5)
C12Y 208/01006	..	Biotin synthase (2.8.1.6)
C12Y 208/01007	..	Cysteine desulfurase (2.8.1.7)
C12Y 208/01008	..	Lipoyl synthase (2.8.1.8)
C12Y 208/01009	..	Molybdenum cofactor sulfurtransferase (2.8.1.9)
C12Y 208/0101	..	Thiazole synthase (2.8.1.10)
C12Y 208/01011	..	Molybdopterin synthase sulfurtransferase (2.8.1.11)
C12Y 208/01012	..	Molybdopterin synthase (2.8.1.12)
C12Y 208/02	.	Sulfotransferases (2.8.2)
C12Y 208/02001	..	Aryl sulfotransferase (2.8.2.1)
C12Y 208/02002	..	Alcohol sulfotransferase (2.8.2.2)
C12Y 208/02003	..	Amine sulfotransferase (2.8.2.3)
C12Y 208/02004	..	Estrone sulfotransferase (2.8.2.4)
C12Y 208/02005	..	Chondroitin 4-sulfotransferase (2.8.2.5)
C12Y 208/02006	..	Choline sulfotransferase (2.8.2.6)
C12Y 208/02007	..	UDP-N-acetylgalactosamine-4-sulfate sulfotransferase (2.8.2.7)
C12Y 208/02008	..	[Heparan sulfate-glucosamine N-sulfotransferase (2.8.2.8)
C12Y 208/02009	..	Tyrosine-ester sulfotransferase (2.8.2.9)

C12Y 208/0201	..	Renilla-luciferin sulfotransferase (2.8.2.10)
C12Y 208/02011	..	Galactosylceramide sulfotransferase (2.8.2.11)
C12Y 208/02013	..	Psychosine sulfotransferase (2.8.2.13)
C12Y 208/02014	..	Bile-salt sulfotransferase (2.8.2.14)
C12Y 208/02015	..	Steroid sulfotransferase (2.8.2.15)
C12Y 208/02016	..	Thiol sulfotransferase (2.8.2.16)
C12Y 208/02017	..	Chondroitin 6-sulfotransferase (2.8.2.17)
C12Y 208/02018	..	Cortisol sulfotransferase (2.8.2.18)
C12Y 208/02019	..	Triglucosylalkylacylglycerol sulfotransferase (2.8.2.19)
C12Y 208/0202	..	Protein-tyrosine sulfotransferase (2.8.2.20)
C12Y 208/02021	..	Keratan sulfotransferase (2.8.2.21)
C12Y 208/02022	..	Aryl-sulfate sulfotransferase (2.8.2.22)
C12Y 208/02023	..	[Heparan sulfate-glucosamine 3-sulfotransferase 1 (2.8.2.23)
C12Y 208/02024	..	Desulfoglucosinolate sulfotransferase (2.8.2.24)
C12Y 208/02025	..	Flavonol 3-sulfotransferase (2.8.2.25)
C12Y 208/02026	..	Quercetin-3-sulfate 3'-sulfotransferase (2.8.2.26)
C12Y 208/02027	..	Quercetin-3-sulfate 4'-sulfotransferase (2.8.2.27)
C12Y 208/02028	..	Quercetin-3,3'-bissulfate 7-sulfotransferase (2.8.2.28)
C12Y 208/02029	..	[Heparan sulfate-glucosamine 3-sulfotransferase 2 (2.8.2.29)
C12Y 208/0203	..	[Heparan sulfate-glucosamine 3-sulfotransferase 3 (2.8.2.30)
C12Y 208/02031	..	Petromyzonol sulfotransferase (2.8.2.31)
C12Y 208/02032	..	Scymnol sulfotransferase (2.8.2.32)
C12Y 208/02033	..	N-Acetylgalactosamine 4-sulfate 6-O-sulfotransferase (2.8.2.33)
C12Y 208/02034	..	Glycochenodeoxycholate sulfotransferase (2.8.2.34)
C12Y 208/02035	..	Dermatan 4-sulfotransferase (2.8.2.35)
C12Y 208/03	.	CoA-transferases (2.8.3)
C12Y 208/03001	..	Propionate CoA-transferase (2.8.3.1)
C12Y 208/03002	..	Oxalate CoA-transferase (2.8.3.2)
C12Y 208/03003	..	Malonate CoA-transferase (2.8.3.3)
C12Y 208/03005	..	3-Oxoacid CoA-transferase (2.8.3.5)
C12Y 208/03006	..	3-Oxadipate CoA-transferase (2.8.3.6)
C12Y 208/03007	..	Succinate--citramalate CoA-transferase (2.8.3.7)
C12Y 208/03008	..	Acetate CoA-transferase (2.8.3.8)
C12Y 208/03009	..	Butyrate--acetoacetate CoA-transferase (2.8.3.9)
C12Y 208/0301	..	Citrate CoA-transferase (2.8.3.10)
C12Y 208/03011	..	Citramalate CoA-transferase (2.8.3.11)
C12Y 208/03012	..	Glutaconate CoA-transferase (2.8.3.12)
C12Y 208/03013	..	Succinate--hydroxymethylglutarate CoA-transferase (2.8.3.13)
C12Y 208/03014	..	5-Hydroxypentanoate CoA-transferase (2.8.3.14)

- C12Y 208/03015 .. Succinyl-CoA:(R)-benzylsuccinate CoA-transferase (2.8.3.15)
- C12Y 208/03016 .. Formyl-CoA transferase (2.8.3.16)
- C12Y 208/03017 .. Cinnamoyl-CoA:phenyllactate CoA-transferase (2.8.3.17)
- C12Y 208/04 .. transferring alkylthio groups (2.8.4)
- C12Y 208/04001 .. Coenzyme-B sulfoethylthiotransferase (2.8.4.1)
- C12Y 208/04002 .. Arsenate-mycothiol transferase (2.8.4.2)

### **C12Y 209/00      Transferases transferring selenium-containing groups (2.9)**

- C12Y 209/01 .. transferring selenium-containing groups (2.9.1)
- C12Y 209/01001 .. L-Seryl-tRNA(Sec) selenium transferase (2.9.1.1)
- C12Y 209/01002 .. O-Phospho-L-seryl-tRNA(Sec):L-selenocysteinyl-tRNA synthase (2.9.1.2)

### **C12Y 210/00      Transferases transferring molybdenum- or tungsten-containing groups (2.10)**

- C12Y 210/01 .. Molybdenumtransferases or tungstenttransferases with sulfide groups as acceptors (2.10.1)
- C12Y 210/01001 .. Molybdopterin molybdotransferase (2.10.1.1)

### **C12Y 301/00      Hydrolases acting on ester bonds (3.1)**

- C12Y 301/01 .. Carboxylic ester hydrolases (3.1.1)
- C12Y 301/01001 .. Carboxylesterase (3.1.1.1)
- C12Y 301/01002 .. Arylesterase (3.1.1.2)
- C12Y 301/01003 .. Triacylglycerol lipase (3.1.1.3)
- C12Y 301/01004 .. Phospholipase A2 (3.1.1.4)
- C12Y 301/01005 .. Lysophospholipase (3.1.1.5)
- C12Y 301/01006 .. Acetylesterase (3.1.1.6)
- C12Y 301/01007 .. Acetylcholinesterase (3.1.1.7)
- C12Y 301/01008 .. Cholinesterase (3.1.1.8), i.e. butyrylcholine-esterase
- C12Y 301/0101 .. Tropinesterase (3.1.1.10)
- C12Y 301/01011 .. Pectinesterase (3.1.1.11)
- C12Y 301/01013 .. Sterol esterase (3.1.1.13)
- C12Y 301/01014 .. Chlorophyllase (3.1.1.14)
- C12Y 301/01015 .. L-Arabinonolactonase (3.1.1.15)
- C12Y 301/01016 .. 4-Carboxymethyl-4-hydroxyisocrotonolactonase (3.1.1.16) ([C12Y 301/01024](#) , [C12Y 503/03004](#) take precedence )
- C12Y 301/01017 .. Gluconolactonase (3.1.1.17)
- C12Y 301/01019 .. Uronolactonase (3.1.1.19)
- C12Y 301/0102 .. Tannase (3.1.1.20)



C12Y 301/01021	..	Retinyl-palmitate esterase (3.1.1.21) ( <a href="#">C12Y 301/01001</a> , <a href="#">C12Y 301/01003</a> take precedence )
C12Y 301/01022	..	Hydroxybutyrate-dimer hydrolase (3.1.1.22)
C12Y 301/01023	..	Acylglycerol lipase (3.1.1.23)
C12Y 301/01024	..	3-Oxoadipate enol-lactonase (3.1.1.24)
C12Y 301/01025	..	1,4-Lactonase (3.1.1.25)
C12Y 301/01026	..	Galactolipase (3.1.1.26)
C12Y 301/01027	..	4-Pyridoxolactonase (3.1.1.27)
C12Y 301/01028	..	Acylcarnitine hydrolase (3.1.1.28)
C12Y 301/01029	..	Aminoacyl-tRNA hydrolase (3.1.1.29)
C12Y 301/0103	..	D-Arabinonolactonase (3.1.1.30)
C12Y 301/01031	..	6-Phosphogluconolactonase (3.1.1.31)
C12Y 301/01032	..	Phospholipase A1 (3.1.1.32)
C12Y 301/01033	..	6-Acetylglucose deacetylase (3.1.1.33)
C12Y 301/01034	..	Lipoprotein lipase (3.1.1.34)
C12Y 301/01035	..	Dihydrocoumarin hydrolase (3.1.1.35)
C12Y 301/01036	..	Limonin-D-ring-lactonase (3.1.1.36)
C12Y 301/01037	..	Steroid-lactonase (3.1.1.37)
C12Y 301/01038	..	Triacetate-lactonase (3.1.1.38)
C12Y 301/01039	..	Actinomycin lactonase (3.1.1.39)
C12Y 301/0104	..	Orsellinate-depside hydrolase (3.1.1.40)
C12Y 301/01041	..	Cephalosporin-C deacetylase (3.1.1.41)
C12Y 301/01042	..	Chlorogenate hydrolase (3.1.1.42)
C12Y 301/01043	..	Alpha-amino-acid esterase (3.1.1.43)
C12Y 301/01044	..	4-Methyloxaloacetate esterase (3.1.1.44)
C12Y 301/01045	..	Carboxymethylenebutenolidase (3.1.1.45)
C12Y 301/01046	..	Deoxylimonate A-ring-lactonase (3.1.1.46)
C12Y 301/01047	..	1-Alkyl-2-acetylgllycerophosphocholine esterase (3.1.1.47), i.e. platelet-activating factor acetylhydrolase
C12Y 301/01048	..	Fusarinine-C ornithinesterase (3.1.1.48)
C12Y 301/01049	..	Sinapine esterase (3.1.1.49)
C12Y 301/0105	..	Wax-ester hydrolase (3.1.1.50)
C12Y 301/01051	..	Phorbol-diester hydrolase (3.1.1.51)
C12Y 301/01052	..	Phosphatidylinositol deacylase (3.1.1.52)
C12Y 301/01053	..	Sialate O-acetylesterase (3.1.1.53)
C12Y 301/01054	..	Acetoxybutynylbithiophene deacetylase (3.1.1.54)
C12Y 301/01055	..	Acetylsalicylate deacetylase (3.1.1.55)
C12Y 301/01056	..	Methylumbelliferyl-acetate deacetylase (3.1.1.56)
C12Y 301/01057	..	2-Pyrone-4,6-dicarboxylate lactonase (3.1.1.57)
C12Y 301/01058	..	N-Acetylgalactosaminoglycan deacetylase (3.1.1.58)

C12Y 301/01059	..	Juvenile-hormone esterase (3.1.1.59)
C12Y 301/0106	..	Bis(2-ethylhexyl)phthalate esterase (3.1.1.60)
C12Y 301/01061	..	Protein-glutamate methylesterase (3.1.1.61)
C12Y 301/01063	..	11-Cis-retinyl-palmitate hydrolase (3.1.1.63)
C12Y 301/01064	..	Retinoid isomerohydrolase (3.1.1.64)
C12Y 301/01065	..	L-Rhamnono-1,4-lactonase (3.1.1.65)
C12Y 301/01066	..	5-(3,4-Diacetoxybut-1-ynyl)-2,2'-bithiophene deacetylase (3.1.1.66)
C12Y 301/01067	..	Fatty-acyl-ethyl-ester synthase (3.1.1.67)
C12Y 301/01068	..	Xylono-1,4-lactonase (3.1.1.68)
C12Y 301/0107	..	Cetraxate benzylesterase (3.1.1.70)
C12Y 301/01071	..	Acetylalkylglycerol acetylhydrolase (3.1.1.71)
C12Y 301/01072	..	Acetylxytan esterase (3.1.1.72)
C12Y 301/01073	..	Feruloyl esterase (3.1.1.73)
C12Y 301/01074	..	Cutinase (3.1.1.74)
C12Y 301/01075	..	Poly(3-hydroxybutyrate) depolymerase (3.1.1.75)
C12Y 301/01076	..	Poly(3-hydroxyoctanoate) depolymerase (3.1.1.76)
C12Y 301/01077	..	Acyloxyacyl hydrolase (3.1.1.77)
C12Y 301/01078	..	Polyneuridine-aldehyde esterase (3.1.1.78)
C12Y 301/01079	..	Hormone-sensitive lipase (3.1.1.79)
C12Y 301/0108	..	Acetylajmaline esterase (3.1.1.80)
C12Y 301/01081	..	Quorum-quenching N-acyl-homoserine lactonase (3.1.1.81)
C12Y 301/01082	..	Pheophorbide (3.1.1.82)
C12Y 301/01083	..	Monoterpene epsilon-lactone hydrolase (3.1.1.83)
C12Y 301/01084	..	Cocaine esterase (3.1.1.84)
C12Y 301/01085	..	Pimelyl-[acyl-carrier protein methyl ester esterase (3.1.1.85)
C12Y 301/01086	..	Rhamnogalacturonan acetylesterase (3.1.1.86)
C12Y 301/01087	..	Fumonisin B1 esterase (3.1.1.87)
C12Y 301/01088	..	Pyrethroid hydrolase (3.1.1.88)
C12Y 301/01089	..	Protein phosphatase methylesterase-1 (3.1.1.89)
C12Y 301/0109	..	All-trans-retinyl ester 13-cis isomerohydrolase (3.1.1.90)
C12Y 301/02	.	Thioester hydrolases (3.1.2)
C12Y 301/02001	..	Acetyl-CoA hydrolase (3.1.2.1)
C12Y 301/02002	..	Palmitoyl-CoA hydrolase (3.1.2.2)
C12Y 301/02003	..	Succinyl-CoA hydrolase (3.1.2.3)
C12Y 301/02004	..	3-Hydroxyisobutyryl-CoA hydrolase (3.1.2.4)
C12Y 301/02005	..	Hydroxymethylglutaryl-CoA hydrolase (3.1.2.5)
C12Y 301/02006	..	Hydroxyacylglutathione hydrolase (3.1.2.6)
C12Y 301/02007	..	Glutathione thioesterase (3.1.2.7)
C12Y 301/0201	..	Formyl-CoA hydrolase (3.1.2.10)

C12Y 301/02011	..	Acetoacetyl-CoA hydrolase (3.1.2.11)
C12Y 301/02012	..	S-Formylglutathione hydrolase (3.1.2.12)
C12Y 301/02013	..	S-Succinylglutathione hydrolase (3.1.2.13)
C12Y 301/02014	..	Oleoyl-[acyl-carrier-protein] hydrolase (3.1.2.14), i.e. ACP-thioesterase
C12Y 301/02015	..	Ubiquitin thioesterase (3.1.2.15)
C12Y 301/02016	..	Citrate-lyase deacetylase (3.1.2.16)
C12Y 301/02017	..	(S)-Methylmalonyl-CoA hydrolase (3.1.2.17)
C12Y 301/02018	..	ADP-dependent short-chain-acyl-CoA hydrolase (3.1.2.18)
C12Y 301/02019	..	ADP-dependent medium-chain-acyl-CoA hydrolase (3.1.2.19)
C12Y 301/0202	..	Acyl-CoA hydrolase (3.1.2.20)
C12Y 301/02021	..	Dodecanoyl-[acyl-carrier-protein] hydrolase (3.1.2.21)
C12Y 301/02022	..	Palmitoyl-protein hydrolase (3.1.2.22)
C12Y 301/02023	..	4-Hydroxybenzoyl-CoA thioesterase (3.1.2.23)
C12Y 301/02025	..	Phenylacetyl-CoA hydrolase (3.1.2.25)
C12Y 301/02026	..	Bile-acid-CoA hydrolase (3.1.2.26)
C12Y 301/02027	..	Choloyl-CoA hydrolase (3.1.2.27)
C12Y 301/02028	..	1,4-Dihydroxy-2-naphthoyl-CoA hydrolase (3.1.2.28)
C12Y 301/02029	..	Fluoroacetyl-CoA thioesterase (3.1.2.29)
C12Y 301/03	.	Phosphoric monoester hydrolases (3.1.3)
C12Y 301/03001	..	Alkaline phosphatase (3.1.3.1)
C12Y 301/03002	..	Acid phosphatase (3.1.3.2)
C12Y 301/03003	..	Phosphoserine phosphatase (3.1.3.3)
C12Y 301/03004	..	Phosphatidate phosphatase (3.1.3.4)
C12Y 301/03005	..	5'-Nucleotidase (3.1.3.5)
C12Y 301/03006	..	3'-Nucleotidase (3.1.3.6)
C12Y 301/03007	..	3'(2'),5'-Bisphosphate nucleotidase (3.1.3.7)
C12Y 301/03008	..	3-Phytase (3.1.3.8)
C12Y 301/03009	..	Glucose-6-phosphatase (3.1.3.9)
C12Y 301/0301	..	Glucose-1-phosphatase (3.1.3.10)
C12Y 301/03011	..	Fructose-bisphosphatase (3.1.3.11)
C12Y 301/03012	..	Trehalose-phosphatase (3.1.3.12)
C12Y 301/03013	..	Bisphosphoglycerate phosphatase (3.1.3.13)
C12Y 301/03014	..	Methylphosphothioglycerate phosphatase (3.1.3.14)
C12Y 301/03015	..	Histidinol-phosphatase (3.1.3.15)
C12Y 301/03016	..	Phosphoprotein phosphatase (3.1.3.16), i.e. calcineurin
C12Y 301/03017	..	[Phosphorylase phosphatase (3.1.3.17)
C12Y 301/03018	..	Phosphoglycolate phosphatase (3.1.3.18)
C12Y 301/03019	..	Glycerol-2-phosphatase (3.1.3.19)
C12Y 301/0302	..	Phosphoglycerate phosphatase (3.1.3.20)

C12Y 301/03021	..	Glycerol-1-phosphatase (3.1.3.21)
C12Y 301/03022	..	Mannitol-1-phosphatase (3.1.3.22)
C12Y 301/03023	..	Sugar-phosphatase (3.1.3.23)
C12Y 301/03024	..	Sucrose-phosphate phosphatase (3.1.3.24)
C12Y 301/03025	..	Inositol-phosphate phosphatase (3.1.3.25)
C12Y 301/03026	..	4-Phytase (3.1.3.26), i.e. 6-phytase
C12Y 301/03027	..	Phosphatidylglycerophosphatase (3.1.3.27)
C12Y 301/03028	..	ADP-phosphoglycerate phosphatase (3.1.3.28)
C12Y 301/03029	..	N-Acylneuraminate-9-phosphatase (3.1.3.29)
C12Y 301/03031	..	Nucleotidase (3.1.3.31)
C12Y 301/03032	..	Polynucleotide 3'-phosphatase (3.1.3.32)
C12Y 301/03033	..	Polynucleotide 5'-phosphatase (3.1.3.33)
C12Y 301/03034	..	Deoxynucleotide 3'-phosphatase (3.1.3.34)
C12Y 301/03035	..	Thymidylate 5'-phosphatase (3.1.3.35)
C12Y 301/03036	..	Phosphoinositide 5-phosphatase (3.1.3.36)
C12Y 301/03037	..	Sedoheptulose-bisphosphatase (3.1.3.37)
C12Y 301/03038	..	3-Phosphoglycerate phosphatase (3.1.3.38)
C12Y 301/03039	..	Streptomycin-6-phosphatase (3.1.3.39)
C12Y 301/0304	..	Guanidinodeoxy-scylo-inositol-4-phosphatase (3.1.3.40)
C12Y 301/03041	..	4-Nitrophenylphosphatase (3.1.3.41)
C12Y 301/03042	..	[Glycogen-synthase-D phosphatase (3.1.3.42)
C12Y 301/03043	..	[Pyruvate dehydrogenase (acetyl-transferring)-phosphatase (3.1.3.43)
C12Y 301/03044	..	[Acetyl-CoA carboxylase-phosphatase (3.1.3.44)
C12Y 301/03045	..	3-Deoxy-manno-octulosonate-8-phosphatase (3.1.3.45)
C12Y 301/03046	..	Fructose-2,6-bisphosphate 2-phosphatase (3.1.3.46)
C12Y 301/03047	..	[Hydroxymethylglutaryl-CoA reductase (NADPH)-phosphatase (3.1.3.47)
C12Y 301/03048	..	Protein-tyrosine-phosphatase (3.1.3.48)
C12Y 301/03049	..	[Pyruvate kinase-phosphatase (3.1.3.49)
C12Y 301/0305	..	Sorbitol-6-phosphatase (3.1.3.50)
C12Y 301/03051	..	Dolichyl-phosphatase (3.1.3.51)
C12Y 301/03052	..	[3-Methyl-2-oxobutanoate dehydrogenase (2-methylpropanoyl-transferring)-phosphatase (3.1.3.52)
C12Y 301/03053	..	[Myosin-light-chain phosphatase (3.1.3.53)
C12Y 301/03054	..	Fructose-2,6-bisphosphate 6-phosphatase (3.1.3.54)
C12Y 301/03055	..	Caldesmon-phosphatase (3.1.3.55)
C12Y 301/03056	..	Inositol-polyphosphate 5-phosphatase (3.1.3.56)
C12Y 301/03057	..	Inositol-1,4-bisphosphate 1-phosphatase (3.1.3.57)
C12Y 301/03058	..	Sugar-terminal-phosphatase (3.1.3.58)
C12Y 301/03059	..	Alkylacetylgllycerophosphatase (3.1.3.59)
C12Y 301/0306	..	Phosphoenolpyruvate phosphatase (3.1.3.60)

C12Y 301/03062	..	Multiple inositol-polyphosphate phosphatase (3.1.3.62)
C12Y 301/03063	..	2-Carboxy-D-arabinitol-1-phosphatase (3.1.3.63)
C12Y 301/03064	..	Phosphatidylinositol-3-phosphatase (3.1.3.64)
C12Y 301/03066	..	Phosphatidylinositol-3,4-bisphosphate 4-phosphatase (3.1.3.66)
C12Y 301/03067	..	Phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase (3.1.3.67)
C12Y 301/03068	..	2-Deoxyglucose-6-phosphatase (3.1.3.68)
C12Y 301/03069	..	Glucosylglycerol 3-phosphatase (3.1.3.69)
C12Y 301/0307	..	Mannosyl-3-phosphoglycerate phosphatase (3.1.3.70)
C12Y 301/03071	..	2-Phosphosulfolactate phosphatase (3.1.3.71)
C12Y 301/03072	..	5-Phytase (3.1.3.72)
C12Y 301/03073	..	Adenosylcobalamin/alpha-ribazole phosphatase (3.1.3.73)
C12Y 301/03074	..	Pyridoxal phosphatase (3.1.3.74)
C12Y 301/03075	..	Phosphoethanolamine/phosphocholine phosphatase (3.1.3.75)
C12Y 301/03076	..	Lipid-phosphate phosphatase (3.1.3.76)
C12Y 301/03077	..	Acireductone synthase (3.1.3.77)
C12Y 301/03078	..	Phosphatidylinositol-4,5-bisphosphate 4-phosphatase (3.1.3.78)
C12Y 301/03079	..	Mannosylfructose-phosphate phosphatase (3.1.3.79)
C12Y 301/0308	..	2,3-Bisphosphoglycerate 3-phosphatase (3.1.3.80)
C12Y 301/03081	..	Diacylglycerol diphosphate phosphatase (3.1.3.81)
C12Y 301/03082	..	D-Glycero-beta-D-manno-heptose 1,7-bisphosphate 7-phosphatase (3.1.3.82)
C12Y 301/03083	..	D-Glycero-alpha-D-manno-heptose-1,7-bisphosphate 7-phosphatase (3.1.3.83)
C12Y 301/03084	..	ADP-ribose 1''-phosphate phosphatase (3.1.3.84)
C12Y 301/03085	..	Glucosyl-3-phosphoglycerate phosphatase (3.1.3.85)
C12Y 301/03086	..	Phosphatidylinositol-3,4,5-trisphosphate 5-phosphatase (3.1.3.86)
C12Y 301/04	.	Phosphoric diester hydrolases (3.1.4)
C12Y 301/04001	..	Phosphodiesterase I (3.1.4.1)
C12Y 301/04002	..	Glycerophosphocholine phosphodiesterase (3.1.4.2)
C12Y 301/04003	..	Phospholipase C (3.1.4.3)
C12Y 301/04004	..	Phospholipase D (3.1.4.4)
C12Y 301/04011	..	Phosphoinositide phospholipase C (3.1.4.11)
C12Y 301/04012	..	Sphingomyelin phosphodiesterase (3.1.4.12)
C12Y 301/04013	..	Serine-ethanolaminephosphate phosphodiesterase (3.1.4.13)
C12Y 301/04014	..	[Acyl-carrier-protein phosphodiesterase (3.1.4.14)
C12Y 301/04015	..	Adenylyl-[glutamate--ammonia ligase hydrolase (3.1.4.15)
C12Y 301/04016	..	2',3'-Cyclic-nucleotide 2'-phosphodiesterase (3.1.4.16)
C12Y 301/04017	..	3',5'-Cyclic-nucleotide phosphodiesterase (3.1.4.17)
C12Y 301/04035	..	3',5'-Cyclic-GMP phosphodiesterase (3.1.4.35)
C12Y 301/04037	..	2',3'-Cyclic-nucleotide 3'-phosphodiesterase (3.1.4.37)
C12Y 301/04038	..	Glycerophosphocholine cholinephosphodiesterase (3.1.4.38)

C12Y 301/04039	..	Alkylglycerophosphoethanolamine phosphodiesterase (3.1.4.39)
C12Y 301/0404	..	CMP-N-acylneuraminate phosphodiesterase (3.1.4.40)
C12Y 301/04041	..	Sphingomyelin phosphodiesterase D (3.1.4.41)
C12Y 301/04042	..	Glycerol-1,2-cyclic-phosphate 2-phosphodiesterase (3.1.4.42)
C12Y 301/04043	..	Glycerophosphoinositol inositolphosphodiesterase (3.1.4.43)
C12Y 301/04044	..	Glycerophosphoinositol glycerophosphodiesterase (3.1.4.44)
C12Y 301/04045	..	N-Acetylglucosamine-1-phosphodiester alpha-N-acetylglucosaminidase (3.1.4.45)
C12Y 301/04046	..	Glycerophosphodiester phosphodiesterase (3.1.4.46)
C12Y 301/04048	..	Dolichylphosphate-glucose phosphodiesterase (3.1.4.48)
C12Y 301/04049	..	Dolichylphosphate-mannose phosphodiesterase (3.1.4.49)
C12Y 301/0405	..	Glycosylphosphatidylinositol phospholipase D (3.1.4.50)
C12Y 301/04051	..	Glucose-1-phospho-D-mannosylglycoprotein phosphodiesterase (3.1.4.51)
C12Y 301/04052	..	Cyclic-guanylate-specific phosphodiesterase (3.1.4.52)
C12Y 301/04053	..	3',5'-Cyclic-AMP phosphodiesterase (3.1.4.53)
C12Y 301/04054	..	N-Acetylphosphatidylethanolamine-hydrolyzing phospholipase D (3.1.4.54)
C12Y 301/05	.	Triphosphoric monoester hydrolases (3.1.5)
C12Y 301/05001	..	dGTPase (3.1.5.1)
C12Y 301/06	.	Sulfuric ester hydrolases (3.1.6)
C12Y 301/06001	..	Arylsulfatase (3.1.6.1)
C12Y 301/06002	..	Steryl-sulfatase (3.1.6.2)
C12Y 301/06003	..	Glycosulfatase (3.1.6.3)
C12Y 301/06004	..	N-Acetylgalactosamine-6-sulfatase (3.1.6.4)
C12Y 301/06006	..	Choline-sulfatase (3.1.6.6)
C12Y 301/06007	..	Cellulose-polysulfatase (3.1.6.7)
C12Y 301/06008	..	Cerebroside-sulfatase (3.1.6.8)
C12Y 301/06009	..	Chondro-4-sulfatase (3.1.6.9)
C12Y 301/0601	..	Chondro-6-sulfatase (3.1.6.10)
C12Y 301/06011	..	Disulfoglucosamine-6-sulfatase (3.1.6.11)
C12Y 301/06012	..	N-Acetylgalactosamine-4-sulfatase (3.1.6.12)
C12Y 301/06013	..	Iduronate-2-sulfatase (3.1.6.13)
C12Y 301/06014	..	N-Acetylglucosamine-6-sulfatase (3.1.6.14)
C12Y 301/06015	..	N-Sulfoglucosamine-3-sulfatase (3.1.6.15)
C12Y 301/06016	..	Monomethyl-sulfatase (3.1.6.16)
C12Y 301/06017	..	D-Lactate-2-sulfatase (3.1.6.17)
C12Y 301/06018	..	Glucuronate-2-sulfatase (3.1.6.18)
C12Y 301/07	.	Diphosphoric monoester hydrolases (3.1.7)
C12Y 301/07001	..	Prenyl-diphosphatase (3.1.7.1)
C12Y 301/07002	..	Guanosine-3',5'-bis(diphosphate) 3'-diphosphatase (3.1.7.2)



C12Y 301/07003	..	Monoterpenyl-diphosphatase (3.1.7.3)
C12Y 301/07004	..	Sclareol cyclase (3.1.7.4)
C12Y 301/07005	..	Geranylgeranyl diphosphate diphosphatase (3.1.7.5)
C12Y 301/07006	..	Farnesyl diphosphatase (3.1.7.6)
C12Y 301/07007	..	Drimenol cyclase (3.1.7.7)
C12Y 301/07008	..	Tuberculosinol synthase (3.1.7.8)
C12Y 301/07009	..	Isotuberculosinol synthase (3.1.7.9)
C12Y 301/08	.	Phosphoric triester hydrolases (3.1.8)
C12Y 301/08001	..	Aryldialkylphosphatase (3.1.8.1), i.e. paraoxonase
C12Y 301/08002	..	Diisopropyl-fluorophosphatase (3.1.8.2)
C12Y 301/11	.	Exodeoxyribonucleases producing 5'-phosphomonoesters (3.1.11)
C12Y 301/11001	..	Exodeoxyribonuclease I (3.1.11.1)
C12Y 301/11002	..	Exodeoxyribonuclease III (3.1.11.2)
C12Y 301/11003	..	Exodeoxyribonuclease (lambda-induced) (3.1.11.3)
C12Y 301/11004	..	Exodeoxyribonuclease (phage SP3-induced)(3.1.11.4)
C12Y 301/11005	..	Exodeoxyribonuclease V (3.1.11.5)
C12Y 301/11006	..	Exodeoxyribonuclease VII (3.1.11.6)
C12Y 301/13	.	Exoribonucleases producing 5'-phosphomonoesters (3.1.13)
C12Y 301/13001	..	Exoribonuclease II (3.1.13.1)
C12Y 301/13002	..	Exoribonuclease H (3.1.13.2)
C12Y 301/13003	..	Oligonucleotidase (3.1.13.3)
C12Y 301/13004	..	Poly(A)-specific ribonuclease (3.1.13.4)
C12Y 301/13005	..	Ribonuclease D (3.1.13.5)
C12Y 301/14	.	Exoribonucleases producing 3'-phosphomonoesters (3.1.14)
C12Y 301/14001	..	Yeast ribonuclease (3.1.14.1)
C12Y 301/15	.	Exonucleases active with either ribo- or deoxyribonucleic acids and producing 5'-phosphomonoesters (3.1.15)
C12Y 301/15001	..	Venom exonuclease (3.1.15.1)
C12Y 301/16	.	Exonucleases active with either ribo- or deoxyribonucleic acids and producing 3'-phosphomonoesters (3.16)
C12Y 301/16001	..	Spleen exonuclease (3.1.16.1), i.e. 5->3 exoribonuclease
C12Y 301/21	.	Endodeoxyribonucleases producing 5'-phosphomonoesters (3.1.21)
C12Y 301/21001	..	Deoxyribonuclease I (3.1.21.1)
C12Y 301/21002	..	Deoxyribonuclease IV (phage-T(4)-induced)(3.1.21.2)
C12Y 301/21003	..	Type I site-specific deoxyribonuclease (3.1.21.3)
C12Y 301/21004	..	Type II site-specific deoxyribonuclease (3.1.21.4)

C12Y 301/21005	..	Type III site-specific deoxyribonuclease (3.1.21.5)
C12Y 301/21006	..	CC-preferring endodeoxyribonuclease (3.1.21.6)
C12Y 301/21007	..	Deoxyribonuclease V (3.1.21.7)
C12Y 301/22	.	Endodeoxyribonucleases producing 3'-phosphomonoesters (3.1.22)
C12Y 301/22001	..	Deoxyribonuclease II (3.1.22.1)
C12Y 301/22002	..	Aspergillus deoxyribonuclease K(1) (3.1.22.2)
C12Y 301/22004	..	Crossover junction endodeoxyribonuclease (3.1.22.4)
C12Y 301/22005	..	Deoxyribonuclease X (3.1.22.5)
C12Y 301/25	.	Site-specific endodeoxyribonucleases specific for altered bases (3.1.25)
C12Y 301/25001	..	Deoxyribonuclease ( <a href="#">pyrimidine dimer</a> )(3.1.25.1)
C12Y 301/26	.	Endoribonucleases producing 5'-phosphomonoesters (3.1.26)
C12Y 301/26001	..	Physarum polycephalum ribonuclease (3.1.26.1)
C12Y 301/26002	..	Ribonuclease alpha (3.1.26.2)
C12Y 301/26003	..	Ribonuclease III (3.1.26.3)
C12Y 301/26004	..	Ribonuclease H (3.1.26.4)
C12Y 301/26005	..	Ribonuclease P (3.1.26.5)
C12Y 301/26006	..	Ribonuclease IV (3.1.26.6)
C12Y 301/26007	..	Ribonuclease P4 (3.1.26.7)
C12Y 301/26008	..	Ribonuclease M5 (3.1.26.8)
C12Y 301/26009	..	Ribonuclease ( <a href="#">poly-(U)-specific</a> )(3.1.26.9)
C12Y 301/2601	..	Ribonuclease IX (3.1.26.10)
C12Y 301/26011	..	tRNase Z (3.1.26.11)
C12Y 301/26012	..	Ribonuclease E (3.1.26.12)
C12Y 301/26013	..	Retroviral ribonuclease H (3.1.26.13)
C12Y 301/27	.	Endoribonucleases producing 3'-phosphomonoesters (3.1.27)
C12Y 301/27001	..	Ribonuclease T2 (3.1.27.1)
C12Y 301/27002	..	Bacillus subtilis ribonuclease (3.1.27.2)
C12Y 301/27003	..	Ribonuclease T1 (3.1.27.3)
C12Y 301/27004	..	Ribonuclease U2 (3.1.27.4)
C12Y 301/27005	..	Pancreatic ribonuclease (3.1.27.5)
C12Y 301/27006	..	Enterobacter ribonuclease (3.1.27.6)
C12Y 301/27007	..	Ribonuclease F (3.1.27.7)
C12Y 301/27008	..	Ribonuclease V (3.1.27.8)
C12Y 301/27009	..	tRNA-intron endonuclease (3.1.27.9)
C12Y 301/2701	..	rRNA endonuclease (3.1.27.10)
C12Y 301/30	.	Endoribonucleases active with either ribo- or deoxyribonucleic acids and producing 5'-phosphomonoesters (3.1.30)

- C12Y 301/30001 .. Aspergillus nuclease S1 (3.1.30.1)
- C12Y 301/30002 .. Serratia marcescens nuclease (3.1.30.2)
- C12Y 301/31 . Endoribonucleases active with either ribo- or deoxyribonucleic acids and producing 3'-phosphomonoesters (3.1.31)
- C12Y 301/31001 .. Micrococcal nuclease (3.1.31.1)

## **C12Y 302/00      Hydrolases acting on glycosyl compounds, i.e. glycosylases (3.2)**

- C12Y 302/01 . Glycosidases, i.e. enzymes hydrolysing O- and S-glycosyl compounds (3.2.1)
- C12Y 302/01001 .. Alpha-amylase (3.2.1.1)
- C12Y 302/01002 .. Beta-amylase (3.2.1.2)
- C12Y 302/01003 .. Glucan 1,4-alpha-glucosidase (3.2.1.3), i.e. glucoamylase
- C12Y 302/01004 .. Cellulase (3.2.1.4), i.e. endo-1,4-beta-glucanase
- C12Y 302/01006 .. Endo-1,3(4)-beta-glucanase (3.2.1.6)
- C12Y 302/01007 .. Inulinase (3.2.1.7)
- C12Y 302/01008 .. Endo-1,4-beta-xylanase (3.2.1.8)
- C12Y 302/0101 . Oligo-1,6-glucosidase (3.2.1.10), i.e. sucrase
- C12Y 302/01011 .. Dextranase (3.2.1.11)
- C12Y 302/01014 .. Chitinase (3.2.1.14)
- C12Y 302/01015 .. Polygalacturonase (3.2.1.15)
- C12Y 302/01017 .. Lysozyme (3.2.1.17)
- C12Y 302/01018 .. Exo-alpha-sialidase (3.2.1.18), i.e. trans-sialidase
- C12Y 302/01019 .. Heparinase (3.2.1.19)
- C12Y 302/0102 .. Alpha-glucosidase (3.2.1.20)
- C12Y 302/01021 .. Beta-glucosidase (3.2.1.21)
- C12Y 302/01022 .. Alpha-galactosidase (3.2.1.22)
- C12Y 302/01023 .. Beta-galactosidase (3.2.1.23), i.e. exo-(1-->4)-beta-D-galactanase
- C12Y 302/01024 .. Alpha-mannosidase (3.2.1.24)
- C12Y 302/01025 .. Beta-mannosidase (3.2.1.25), i.e. mannanase
- C12Y 302/01026 .. Beta-fructofuranosidase (3.2.1.26), i.e. invertase
- C12Y 302/01028 .. Alpha,alpha-trehalase (3.2.1.28)
- C12Y 302/01031 .. Beta-glucuronidase (3.2.1.31)
- C12Y 302/01032 .. Xylan endo-1,3-beta-xylosidase (3.2.1.32), i.e. endo-1-3-beta-xylanase
- C12Y 302/01033 .. Amylo-alpha-1,6-glucosidase (3.2.1.33)
- C12Y 302/01035 .. Hyaluronoglucosaminidase (3.2.1.35), i.e. hyaluronidase
- C12Y 302/01036 .. Hyaluronoglucuronidase (3.2.1.36)
- C12Y 302/01037 .. Xylan 1,4-beta-xylosidase (3.2.1.37)
- C12Y 302/01038 .. Beta-D-fucosidase (3.2.1.38)
- C12Y 302/01039 .. Glucan endo-1,3-beta-D-glucosidase (3.2.1.39)
- C12Y 302/0104 .. Alpha-L-rhamnosidase (3.2.1.40)

C12Y 302/01041	..	Pullulanase (3.2.1.41)
C12Y 302/01042	..	GDP-glucosidase (3.2.1.42)
C12Y 302/01043	..	Beta-L-rhamnosidase (3.2.1.43)
C12Y 302/01044	..	Fucoidanase (3.2.1.44)
C12Y 302/01045	..	Glucosylceramidase (3.2.1.45), i.e. beta-glucocerebrosidase
C12Y 302/01046	..	Galactosylceramidase (3.2.1.46)
C12Y 302/01047	..	Galactosylgalactosylglucosylceramidase (3.2.1.47)
C12Y 302/01048	..	Sucrose alpha-glucosidase (3.2.1.48), i.e. sucrase
C12Y 302/01049	..	Alpha-N-acetylgalactosaminidase (3.2.1.49)
C12Y 302/0105	..	Alpha-N-acetylglucosaminidase (3.2.1.50)
C12Y 302/01051	..	Alpha-L-fucosidase (3.2.1.51)
C12Y 302/01052	..	Beta-N-acetylhexosaminidase (3.2.1.52)
C12Y 302/01053	..	Beta-N-acetylgalactosaminidase (3.2.1.53)
C12Y 302/01054	..	Cyclomaltodextrinase (3.2.1.54), i.e. cyclodextrinase
C12Y 302/01055	..	Alpha-N-arabinofuranosidase (3.2.1.55)
C12Y 302/01056	..	Glucuronosyl-disulfoglucosamine glucuronidase (3.2.1.56), i.e. glycuronidase
C12Y 302/01057	..	Isopullulanase (3.2.1.57)
C12Y 302/01058	..	Glucan 1,3-beta-glucosidase (3.2.1.58)
C12Y 302/01059	..	Glucan endo-1,3-alpha-glucosidase (3.2.1.59)
C12Y 302/0106	..	Glucan 1,4-alpha-maltotetraohydrolase (3.2.1.60)
C12Y 302/01061	..	Mycodextranase (3.2.1.61)
C12Y 302/01062	..	Glycosylceramidase (3.2.1.62)
C12Y 302/01063	..	1,2-Alpha-L-fucosidase (3.2.1.63)
C12Y 302/01064	..	2,6-Beta-fructan 6-levanbiohydrolase (3.2.1.64)
C12Y 302/01065	..	Levanase (3.2.1.65)
C12Y 302/01066	..	Quercitrinase (3.2.1.66)
C12Y 302/01067	..	Galacturan 1,4-alpha-galacturonidase (3.2.1.67)
C12Y 302/01068	..	Isoamylase (3.2.1.68)
C12Y 302/0107	..	Glucan 1,6-alpha-glucosidase (3.2.1.70)
C12Y 302/01071	..	Glucan endo-1,2-beta-glucosidase (3.2.1.71)
C12Y 302/01072	..	Xylan 1,3-beta-xylosidase (3.2.1.72)
C12Y 302/01073	..	Licheninase (3.2.1.73)
C12Y 302/01074	..	Glucan 1,4-beta-glucosidase (3.2.1.74)
C12Y 302/01075	..	Glucan endo-1,6-beta-glucosidase (3.2.1.75)
C12Y 302/01076	..	L-Iduronidase (3.2.1.76)
C12Y 302/01077	..	Mannan 1,2-(1,3)-alpha-mannosidase (3.2.1.77)
C12Y 302/01078	..	Mannan endo-1,4-beta-mannosidase (3.2.1.78), i.e. endo-beta-mannanase
C12Y 302/0108	..	Fructan beta-fructosidase (3.2.1.80)
C12Y 302/01081	..	Beta-agarase (3.2.1.81)
C12Y 302/01082	..	Exo-poly-alpha-galacturonosidase (3.2.1.82)

C12Y 302/01083	..	Kappa-carrageenase (3.2.1.83)
C12Y 302/01084	..	Glucan 1,3-alpha-glucosidase (3.2.1.84), i.e. mutanase
C12Y 302/01085	..	6-Phospho-beta-galactosidase (3.2.1.85)
C12Y 302/01086	..	6-Phospho-beta-glucosidase (3.2.1.86)
C12Y 302/01087	..	Capsular-polysaccharide endo-1,3-alpha-galactosidase (3.2.1.87)
C12Y 302/01088	..	Beta-L-arabinosidase (3.2.1.88)
C12Y 302/01089	..	Arabinogalactan endo-1,4-beta-galactosidase (3.2.1.89), i.e. endo-1,4-galactanase
C12Y 302/01091	..	Cellulose 1,4-beta-cellobiosidase (3.2.1.91)
C12Y 302/01092	..	Peptidoglycan beta-N-acetylmuramidase (3.2.1.92)
C12Y 302/01093	..	Alpha,alpha-phosphotrehalase (3.2.1.93)
C12Y 302/01094	..	Glucan 1,6-alpha-isomaltosidase (3.2.1.94)
C12Y 302/01095	..	Dextran 1,6-alpha-isomaltotriosidase (3.2.1.95)
C12Y 302/01096	..	Mannosyl-glycoprotein endo-beta-N-acetylglucosaminidase (3.2.1.96)
C12Y 302/01097	..	Glycopeptide alpha-N-acetylgalactosaminidase (3.2.1.97)
C12Y 302/01098	..	Glucan 1,4-alpha-maltohexaosidase (3.2.1.98)
C12Y 302/01099	..	Arabinan endo-1,5-alpha-L-arabinosidase (3.2.1.99)
C12Y 302/011	..	Mannan 1,4-mannobiosidase (3.2.1.100)
C12Y 302/01101	..	Mannan endo-1,6-alpha-mannosidase (3.2.1.101), i.e. endo-1,6-beta-mannanase
C12Y 302/01102	..	Blood-group-substance endo-1,4-beta-galactosidase (3.2.1.102)
C12Y 302/01103	..	Keratan-sulfate endo-1,4-beta-galactosidase (3.2.1.103)
C12Y 302/01104	..	Steryl-beta-glucosidase (3.2.1.104)
C12Y 302/01105	..	3-Alpha-(S)-strictosidine beta-glucosidase (3.2.1.105)
C12Y 302/01106	..	Mannosyl-oligosaccharide glucosidase (3.2.1.106), i.e. glucosidase I
C12Y 302/01107	..	Protein-glucosylgalactosylhydroxylysine glucosidase (3.2.1.107)
C12Y 302/01108	..	Lactase (3.2.1.108)
C12Y 302/01109	..	Endogalactosaminidase (3.2.1.109)
C12Y 302/01111	..	1,3-Alpha-L-fucosidase (3.2.1.111), i.e. 1,3-alpha-fucosidase
C12Y 302/01112	..	2-Deoxyglucosidase (3.2.1.112)
C12Y 302/01113	..	Mannosyl-oligosaccharide 1,2-alpha-mannosidase (3.2.1.113), i.e. alpha-1,2-mannosidase
C12Y 302/01114	..	Mannosyl-oligosaccharide 1,3-1,6-alpha-mannosidase (3.2.1.114)
C12Y 302/01115	..	Branched-dextran exo-1,2-alpha-glucosidase (3.2.1.115)
C12Y 302/01116	..	Glucan 1,4-alpha-maltotriohydrolase (3.2.1.116)
C12Y 302/01117	..	Amygdalin beta-glucosidase (3.2.1.117)
C12Y 302/01118	..	Prunasin beta-glucosidase (3.2.1.118), i.e. prunasin hydrolase
C12Y 302/01119	..	Vicianin beta-glucosidase (3.2.1.119)
C12Y 302/0112	..	Oligoxyloglucan beta-glycosidase (3.2.1.120)
C12Y 302/01121	..	Polymannuronate hydrolase (3.2.1.121)
C12Y 302/01122	..	Maltose-6'-phosphate glucosidase (3.2.1.122)
C12Y 302/01123	..	Endoglycosylceramidase (3.2.1.123)

C12Y 302/01124	..	3-Deoxy-2-octulosonidase (3.2.1.124)
C12Y 302/01125	..	Raucaffricine beta-glucosidase (3.2.1.125)
C12Y 302/01126	..	Coniferin beta-glucosidase (3.2.1.126)
C12Y 302/01127	..	1,6-alpha-L-fucosidase (3.2.1.127)
C12Y 302/01128	..	Glycyrrhizinate beta-glucuronidase (3.2.1.128), i.e. GL beta-D-glucoronidase
C12Y 302/01129	..	Endo-alpha-sialidase (3.2.1.129)
C12Y 302/0113	..	Glycoprotein endo-alpha-1,2-mannosidase (3.2.1.130)
C12Y 302/01131	..	Xylan alpha-1,2-glucuronosidase (3.2.1.131)
C12Y 302/01132	..	Chitosanase (3.2.1.132)
C12Y 302/01133	..	Glucan 1,4-alpha-maltohydrolase (3.2.1.133), i.e. maltogenic alpha-amylase
C12Y 302/01134	..	Difructose-anhydride synthase (3.2.1.134)
C12Y 302/01135	..	Neopullulanase (3.2.1.135)
C12Y 302/01136	..	Glucuronoarabinoxylan endo-1,4-beta-xylanase (3.2.1.136), i.e. feraxanase or feraxan-endoxylanase
C12Y 302/01137	..	Mannan exo-1,2-1,6-alpha-mannosidase (3.2.1.137)
C12Y 302/01139	..	Alpha-glucuronidase (3.2.1.139)
C12Y 302/0114	..	Lacto-N-biosidase (3.2.1.140)
C12Y 302/01141	..	4-Alpha-D-((1->4)-alpha-D-glucano) trehalose trehalohydrolase (3.2.1.141)
C12Y 302/01142	..	Limit dextrinase (3.2.1.142)
C12Y 302/01143	..	Poly(ADP-ribose) glycohydrolase (3.2.1.143)
C12Y 302/01144	..	3-Deoxyoctulosonase (3.2.1.144)
C12Y 302/01145	..	Galactan 1,3-beta-galactosidase (3.2.1.145), i.e. arabinogalactan endo-1,3-beta-galactosidase
C12Y 302/01146	..	Beta-galactofuranosidase (3.2.1.146)
C12Y 302/01147	..	Thioglucosidase (3.2.1.147), i.e. myrosinase
C12Y 302/01149	..	Beta-primeverosidase (3.2.1.149)
C12Y 302/0115	..	Oligoxyloglucan reducing-end-specific cellobiohydrolase (3.2.1.150)
C12Y 302/01151	..	Xyloglucan-specific endo-beta-1,4-glucanase (3.2.1.151), i.e. endoxyloglucanase
C12Y 302/01152	..	Mannosylglycoprotein endo-beta-mannosidase (3.2.1.152)
C12Y 302/01153	..	Fructan beta-(2,1)-fructosidase (3.2.1.153)
C12Y 302/01154	..	Fructan beta-(2,6)-fructosidase (3.2.1.154)
C12Y 302/01155	..	Xyloglucan-specific exo-beta-1,4-glucanase (3.2.1.155), i.e. exoxyloglucanase
C12Y 302/01156	..	Oligosaccharide reducing-end xylanase (3.2.1.156)
C12Y 302/01157	..	Iota-carrageenase (3.2.1.157)
C12Y 302/01158	..	Alpha-agarase (3.2.1.158)
C12Y 302/01159	..	Alpha-neoagaro-oligosaccharide hydrolase (3.2.1.159)
C12Y 302/01161	..	Beta-apiosyl-beta-glucosidase (3.2.1.161)
C12Y 302/01162	..	Lambda-carrageenase (3.2.1.162)
C12Y 302/01163	..	1,6-Alpha-D-mannosidase (3.2.1.163)
C12Y 302/01164	..	Galactan endo-1,6-beta-galactosidase (3.2.1.164)



C12Y 302/01165	..	Exo-1,4-beta-D-glucosaminidase (3.2.1.165), i.e. exochitosanase
C12Y 302/01166	..	Heparanase (3.2.1.166)
C12Y 302/01167	..	Baicalin-beta-D-glucuronidase (3.2.1.167)
C12Y 302/01168	..	Hesperidin 6-O-alpha-L-rhamnosyl-beta-D-glucosidase (3.2.1.168)
C12Y 302/01169	..	Protein O-GlcNAcase (3.2.1.169)
C12Y 302/0117	..	Mannosylglycerate hydrolase (3.2.1.170)
C12Y 302/01171	..	Rhamnogalacturonan hydrolase (3.2.1.171), i.e. rhamnogalacturonase
C12Y 302/01172	..	Unsaturated rhamnogalacturonyl hydrolase (3.2.1.172)
C12Y 302/01173	..	Rhamnogalacturonan galacturonohydrolase (3.2.1.173)
C12Y 302/01174	..	Rhamnogalacturonan rhamnohydrolase (3.2.1.174)
C12Y 302/01175	..	Beta-D-glucopyranosyl abscisate beta-glucosidase (3.2.1.175)
C12Y 302/01176	..	Cellulose 1,4-beta-cellobiosidase ( <a href="#">reducing end</a> )(3.2.1.176)
C12Y 302/01177	..	Alpha-D-xyloside xylohydrolase (3.2.1.177)
C12Y 302/01178	..	Beta-porphyrane (3.2.1.178)
C12Y 302/01179	..	Gellan tetrasaccharide unsaturated glucuronyl hydrolase (3.2.1.179)
C12Y 302/0118	..	Unsaturated chondroitin disaccharide hydrolase (3.2.1.180)
C12Y 302/02	.	hydrolysing N-glycosyl compounds (3.2.2)
C12Y 302/02001	..	Purine nucleosidase (3.2.2.1)
C12Y 302/02002	..	Inosine nucleosidase (3.2.2.2)
C12Y 302/02003	..	Uridine nucleosidase (3.2.2.3)
C12Y 302/02004	..	AMP nucleosidase (3.2.2.4)
C12Y 302/02005	..	NAD <sup>+</sup> nucleosidase (3.2.2.5)
C12Y 302/02006	..	NAD(P) <sup>+</sup> nucleosidase (3.2.2.6)
C12Y 302/02007	..	Adenosine nucleosidase (3.2.2.7)
C12Y 302/02008	..	Ribosylpyrimidine nucleosidase (3.2.2.8)
C12Y 302/02009	..	Adenosylhomocysteine nucleosidase (3.2.2.9)
C12Y 302/0201	..	Pyrimidine-5'-nucleotide nucleosidase (3.2.2.10)
C12Y 302/02011	..	Beta-aspartyl-N-acetylglucosaminidase (3.2.2.11)
C12Y 302/02012	..	Inosinate nucleosidase (3.2.2.12)
C12Y 302/02013	..	1-Methyladenosine nucleosidase (3.2.2.13)
C12Y 302/02014	..	NMN nucleosidase (3.2.2.14)
C12Y 302/02015	..	DNA-deoxyinosine glycosylase (3.2.2.15)
C12Y 302/02016	..	Methylthioadenosine nucleosidase (3.2.2.16)
C12Y 302/02017	..	Deoxyribodipyrimidine endonucleosidase (3.2.2.17)
C12Y 302/02019	..	Protein ADP-ribosylarginine hydrolase (3.2.2.19)
C12Y 302/0202	..	DNA-3-methyladenine glycosylase I (3.2.2.20), i.e. adenine DNA glycosylase
C12Y 302/02021	..	DNA-3-methyladenine glycosylase II (3.2.2.21)
C12Y 302/02022	..	rRNA N-glycosylase (3.2.2.22)
C12Y 302/02023	..	DNA-formamidopyrimidine glycosylase (3.2.2.23)

C12Y 302/02024	..	ADP-ribosyl-[dinitrogen reductase] hydrolase (3.2.2.24)
C12Y 302/02025	..	N-Methyl nucleosidase (3.2.2.25)
C12Y 302/02026	..	Futalosine hydrolase (3.2.2.26)
C12Y 302/02027	..	Uracil-DNA glycosylase (3.2.2.27)
C12Y 302/02028	..	Double-stranded uracil-DNA glycosylase (3.2.2.28)
C12Y 302/02029	..	Thymine-DNA glycosylase (3.2.2.29)

### **C12Y 303/00      Hydrolases acting on ether bonds (3.3)**

C12Y 303/01	.	Thioether and trialkylsulfonium hydrolases (3.3.1)
C12Y 303/01001	..	Adenosylhomocysteinase (3.3.1.1)
C12Y 303/01002	..	Adenosylmethionine hydrolase (3.3.1.2)
C12Y 303/02	.	Ether hydrolases (3.3.2)
C12Y 303/02001	..	Isochorismatase (3.3.2.1)
C12Y 303/02002	..	Alkenylglycerophosphocholine hydrolase (3.3.2.2)
C12Y 303/02003	..	Epoxide hydrolase (3.3.2.3) ( <a href="#">C12Y 303/02009</a> or <a href="#">C12Y 303/0201</a> takes precedence )
C12Y 303/02004	..	Trans-epoxysuccinate hydrolase (3.3.2.4)
C12Y 303/02005	..	Alkenylglycerophosphoethanolamine hydrolase (3.3.2.5)
C12Y 303/02006	..	Leukotriene-A4 hydrolase (3.3.2.6)
C12Y 303/02007	..	Hepoxilin-epoxide hydrolase (3.3.2.7)
C12Y 303/02008	..	Limonene-1,2-epoxide hydrolase (3.3.2.8)
C12Y 303/02009	..	Microsomal epoxide hydrolase (3.3.2.9), i.e. styreneepoxide hydrolase
C12Y 303/0201	..	Soluble epoxide hydrolase (3.3.2.10)
C12Y 303/02011	..	Cholesterol-5,6-oxide hydrolase (3.3.2.11)

### **C12Y 304/00      Hydrolases acting on peptide bonds i.e. peptidases (3.4)**

C12Y 304/11	.	Aminopeptidases (3.4.11)
C12Y 304/11001	..	Leucyl aminopeptidase (3.4.11.1)
C12Y 304/11002	..	Membrane alanyl aminopeptidase (3.4.11.2), i.e. aminopeptidase N
C12Y 304/11003	..	Cystinyl aminopeptidase (3.4.11.3)
C12Y 304/11004	..	Tripeptide aminopeptidase (3.4.11.4)
C12Y 304/11005	..	Prolyl aminopeptidase (3.4.11.5)
C12Y 304/11006	..	Aminopeptidase B (3.4.11.6)
C12Y 304/11007	..	Glutamyl aminopeptidase (3.4.11.7)
C12Y 304/11009	..	Xaa-Pro aminopeptidase (3.4.11.9), i.e. aminopeptidase P
C12Y 304/1101	..	Bacterial leucyl aminopeptidase (3.4.11.10)
C12Y 304/11011	..	Aminopeptidase (3.4.11.11)
C12Y 304/11013	..	Clostridial aminopeptidase (3.4.11.13)

C12Y 304/11014	..	Cytosol alanyl aminopeptidase (3.4.11.14)
C12Y 304/11015	..	Aminopeptidase Y (3.4.11.15), i.e. lysyl aminopeptidase
C12Y 304/11016	..	Xaa-Trp aminopeptidase (3.4.11.16)
C12Y 304/11017	..	Tryptophanyl aminopeptidase (3.4.11.17)
C12Y 304/11018	..	Methionyl aminopeptidase (3.4.11.18)
C12Y 304/11019	..	D-Stereospecific aminopeptidase (3.4.11.19)
C12Y 304/1102	..	Aminopeptidase Ey (3.4.11.20)
C12Y 304/11021	..	Aspartyl aminopeptidase (3.4.11.21)
C12Y 304/11022	..	Aminopeptidase I (3.4.11.22)
C12Y 304/11023	..	PepB aminopeptidase (3.4.11.23)
C12Y 304/11024	..	Aminopeptidase S (3.4.11.24)
C12Y 304/11025	..	Beta-peptidyl aminopeptidase (3.4.11.25)
C12Y 304/11026	..	Intermediate cleaving peptidase 55 (3.4.11.26)
C12Y 304/13	.	Dipeptidases (3.4.13)
C12Y 304/13003	..	Xaa-His dipeptidase (3.4.13.3) ( <a href="#">C12Y 304/13018</a> , <a href="#">C12Y 304/1302</a> take precedence )
C12Y 304/13004	..	Xaa-Arg dipeptidase (3.4.13.4)
C12Y 304/13005	..	Xaa-methyl-His dipeptidase (3.4.13.5)
C12Y 304/13007	..	Glu-Glu dipeptidase (3.4.13.7)
C12Y 304/13009	..	Xaa-Pro dipeptidase (3.4.13.9) i.e. prolidase
C12Y 304/13011	..	Dipeptidase (3.4.13.11) ( <a href="#">C12Y 304/13018</a> or <a href="#">C12Y 304/13019</a> takes precedence )
C12Y 304/13012	..	Met-Xaa dipeptidase (3.4.13.12)
C12Y 304/13017	..	Non-stereospecific dipeptidase (3.4.13.17)
C12Y 304/13018	..	Cytosol nonspecific dipeptidase (3.4.13.18), i.e. glycyl-leucine dipeptidase
C12Y 304/13019	..	Membrane dipeptidase (3.4.13.19)
C12Y 304/1302	..	Beta-Ala-His dipeptidase (3.4.13.20)
C12Y 304/13021	..	Dipeptidase E (3.4.13.21)
C12Y 304/13022	..	D-Ala-D-Ala dipeptidase (3.4.13.22)
C12Y 304/14	.	Dipeptidyl-peptidases and tripeptidyl-peptidases (3.4.14)
C12Y 304/14001	..	Dipeptidyl-peptidase I (3.4.14.1), i.e. cathepsin-C
C12Y 304/14002	..	Dipeptidyl-peptidase II (3.4.14.2)
C12Y 304/14004	..	Dipeptidyl-peptidase III (3.4.14.4)
C12Y 304/14005	..	Dipeptidyl-peptidase IV (3.4.14.5)
C12Y 304/14006	..	Dipeptidyl-dipeptidase (3.4.14.6)
C12Y 304/14008	..	Tripeptidyl peptidase (3.4.14.8) ( <a href="#">C12Y 304/14009</a> , <a href="#">C12Y 304/1401</a> take precedence )
C12Y 304/14009	..	Tripeptidyl-peptidase I (3.4.14.9)
C12Y 304/1401	..	Tripeptidyl-peptidase II (3.4.14.10)
C12Y 304/14011	..	Xaa-Pro dipeptidyl-peptidase (3.4.14.11)

C12Y 304/14012	..	Xaa-Xaa-Pro tripeptidyl-peptidase (3.4.14.12), i.e. prolyltri-peptidyl aminopeptidase
C12Y 304/15	.	Peptidyl-dipeptidases (3.4.15)
C12Y 304/15001	..	Peptidyl-dipeptidase A (3.4.15.1)
C12Y 304/15004	..	Peptidyl-dipeptidase B (3.4.15.4)
C12Y 304/15005	..	Peptidyl-dipeptidase Dcp (3.4.15.5)
C12Y 304/15006	..	Cyanophycinase (3.4.15.6)
C12Y 304/16	.	Serine-type carboxypeptidases (3.4.16)
C12Y 304/16001	..	Serine carboxypeptidase (3.4.16.1) ( <a href="#">C12Y 304/16005</a> , <a href="#">C12Y 304/16006</a> take precedence )
C12Y 304/16002	..	Lysosomal Pro-Xaa carboxypeptidase (3.4.16.2)
C12Y 304/16004	..	Serine-type D-Ala-D-Ala carboxypeptidase (3.4.16.4)
C12Y 304/16005	..	Carboxypeptidase C (3.4.16.5), i.e. carboxypeptidase Y
C12Y 304/16006	..	Carboxypeptidase D (3.4.16.6)
C12Y 304/17	.	Metallo-carboxypeptidases (3.4.17)
C12Y 304/17001	..	Carboxypeptidase A (3.4.17.1)
C12Y 304/17002	..	Carboxypeptidase B (3.4.17.2)
C12Y 304/17003	..	Lysine carboxypeptidase (3.4.17.3)
C12Y 304/17004	..	Gly-Xaa carboxypeptidase (3.4.17.4)
C12Y 304/17006	..	Alanine carboxypeptidase (3.4.17.6)
C12Y 304/17008	..	Muramoylpentapeptide carboxypeptidase (3.4.17.8)
C12Y 304/1701	..	Carboxypeptidase E (3.4.17.10)
C12Y 304/17011	..	Glutamate carboxypeptidase (3.4.17.11)
C12Y 304/17012	..	Carboxypeptidase M (3.4.17.12)
C12Y 304/17013	..	Muramoyltetrapeptide carboxypeptidase (3.4.17.13)
C12Y 304/17014	..	Zinc D-Ala-D-Ala carboxypeptidase (3.4.17.14)
C12Y 304/17015	..	Carboxypeptidase A2 (3.4.17.15)
C12Y 304/17016	..	Membrane Pro-Xaa carboxypeptidase (3.4.17.16)
C12Y 304/17017	..	Tubuliny-Tyr carboxypeptidase (3.4.17.17)
C12Y 304/17018	..	Carboxypeptidase T (3.4.17.18)
C12Y 304/17019	..	Carboxypeptidase Taq (3.4.17.19)
C12Y 304/1702	..	Carboxypeptidase U (3.4.17.20)
C12Y 304/17021	..	Glutamate carboxypeptidase II (3.4.17.21)
C12Y 304/17022	..	Metallo-carboxypeptidase D (3.4.17.22)
C12Y 304/17023	..	Angiotensin-converting enzyme 2 (3.4.17.23)
C12Y 304/18	.	Cysteine-type carboxypeptidases (3.4.18)
C12Y 304/18001	..	Cathepsin X (3.4.18.1)
C12Y 304/19	.	Omega peptidases (3.4.19)

C12Y 304/19001	..	Acylaminoacyl-peptidase (3.4.19.1)
C12Y 304/19002	..	Peptidyl-glycinamidase (3.4.19.2)
C12Y 304/19003	..	Pyroglutamyl-peptidase I (3.4.19.3)
C12Y 304/19005	..	Beta-aspartyl-peptidase (3.4.19.5)
C12Y 304/19006	..	Pyroglutamyl-peptidase II (3.4.19.6)
C12Y 304/19007	..	N-Formylmethionyl-peptidase (3.4.19.7)
C12Y 304/19009	..	Gamma-glutamyl hydrolase (3.4.19.9)
C12Y 304/19011	..	Gamma-D-glutamyl-meso-diaminopimelate peptidase (3.4.19.11)
C12Y 304/19012	..	Ubiquitinyl hydrolase 1 (3.4.19.12)
C12Y 304/19013	..	Glutathione hydrolase 1 (3.4.19.13)
C12Y 304/21	.	Serine endopeptidases (3.4.21)
C12Y 304/21001	..	Chymotrypsin (3.4.21.1)
C12Y 304/21002	..	Chymotrypsin C (3.4.21.2)
C12Y 304/21003	..	Metridin (3.4.21.3)
C12Y 304/21004	..	Trypsin (3.4.21.4)
C12Y 304/21005	..	Thrombin (3.4.21.5)
C12Y 304/21006	..	Coagulation factor Xa (3.4.21.6)
C12Y 304/21007	..	Plasmin (3.4.21.7), i.e. fibrinolysin
C12Y 304/21008	..	Kallikrein (3.4.21.8) ( <a href="#">C12Y 304/21034</a> , <a href="#">C12Y 304/21035</a> take precedence )
C12Y 304/21009	..	Enteropeptidase (3.4.21.9), i.e. enterokinase
C12Y 304/2101	..	Acrosin (3.4.21.10)
C12Y 304/21011	..	Elastase ( <a href="#">3.4.21.11</a> ) ( <a href="#">C12Y 304/21036</a> or <a href="#">C12Y 304/21037</a> takes precedence )
C12Y 304/21012	..	Alpha-lytic endopeptidase (3.4.21.12)
C12Y 304/21014	..	Microbial serine proteases ( <a href="#">3.4.21.14</a> ) ( <a href="#">C12Y 304/21062</a> - <b>C12Y 304/67</b> takes precedence )
C12Y 304/21019	..	Glutamyl endopeptidase (3.4.21.19)
C12Y 304/2102	..	Cathepsin G (3.4.21.20)
C12Y 304/21021	..	Coagulation factor VIIa (3.4.21.21)
C12Y 304/21022	..	Coagulation factor IXa (3.4.21.22)
C12Y 304/21025	..	Cucumisin (3.4.21.25)
C12Y 304/21026	..	Prolyl oligopeptidase (3.4.21.26), i.e. proline-specific endopeptidase
C12Y 304/21027	..	Coagulation factor XIa (3.4.21.27)
C12Y 304/21031	..	Urokinase ( <a href="#">3.4.21.31</a> ) ( <a href="#">C12Y 304/21068</a> or <a href="#">C12Y 304/21073</a> takes precedence )
C12Y 304/21032	..	Brachyurin (3.4.21.32)
C12Y 304/21034	..	Plasma kallikrein (3.4.21.34)
C12Y 304/21035	..	Tissue kallikrein (3.4.21.35)
C12Y 304/21036	..	Pancreatic elastase (3.4.21.36)
C12Y 304/21037	..	Leukocyte elastase (3.4.21.37), i.e. neutrophil-elastase
C12Y 304/21038	..	Coagulation factor XIIa (3.4.21.38)
C12Y 304/21039	..	Chymase (3.4.21.39)

C12Y 304/21041	..	Complement subcomponent C1r (3.4.21.41)
C12Y 304/21042	..	Complement subcomponent C1s (3.4.21.42)
C12Y 304/21043	..	Classical-complement-pathway C3/C5 convertase (3.4.21.43)
C12Y 304/21045	..	Complement factor I (3.4.21.45)
C12Y 304/21046	..	Complement factor D (3.4.21.46)
C12Y 304/21047	..	Alternative-complement-pathway C3/C5 convertase (3.4.21.47), i.e. properdin factor B
C12Y 304/21048	..	Cerevisin (3.4.21.48)
C12Y 304/21049	..	Hypodermin C (3.4.21.49)
C12Y 304/2105	..	Lysyl endopeptidase (3.4.21.50)
C12Y 304/21053	..	Endopeptidase La (3.4.21.53)
C12Y 304/21054	..	Gamma-renin (3.4.21.54)
C12Y 304/21055	..	Venombin AB (3.4.21.55)
C12Y 304/21057	..	Leucyl endopeptidase (3.4.21.57)
C12Y 304/21059	..	Tryptase (3.4.21.59)
C12Y 304/2106	..	Scutellarin (3.4.21.60)
C12Y 304/21061	..	Kexin (3.4.21.61), i.e. proprotein convertase subtilisin/kexin type 9
C12Y 304/21062	..	Subtilisin (3.4.21.62)
C12Y 304/21063	..	Oryzin (3.4.21.63)
C12Y 304/21064	..	Peptidase K (3.4.21.64)
C12Y 304/21065	..	Thermomycolin (3.4.21.65)
C12Y 304/21066	..	Thermitase (3.4.21.66)
C12Y 304/21067	..	Endopeptidase So (3.4.21.67)
C12Y 304/21068	..	Tissue plasminogen activator (3.4.21.68), i.e. tPA
C12Y 304/21069	..	Protein C activated (3.4.21.69)
C12Y 304/2107	..	Pancreatic endopeptidase E (3.4.21.70)
C12Y 304/21071	..	Pancreatic elastase II (3.4.21.71)
C12Y 304/21072	..	IgA-specific serine endopeptidase (3.4.21.72)
C12Y 304/21073	..	u-Plasminogen activator (3.4.21.73), i.e. urokinase
C12Y 304/21074	..	Venombin A (3.4.21.74)
C12Y 304/21075	..	Furin (3.4.21.75)
C12Y 304/21076	..	Myeloblastin (3.4.21.76)
C12Y 304/21077	..	Semenogelase (3.4.21.77), i.e. prostate specific antigen or PSA or kallikrein 3
C12Y 304/21078	..	Granzyme A (3.4.21.78)
C12Y 304/21079	..	Granzyme B (3.4.21.79)
C12Y 304/2108	..	Streptogrisin A (3.4.21.80)
C12Y 304/21081	..	Streptogrisin B (3.4.21.81)
C12Y 304/21082	..	Glutamyl endopeptidase II (3.4.21.82)
C12Y 304/21083	..	Oligopeptidase B (3.4.21.83), i.e. trypsin-like protease
C12Y 304/21084	..	limulus clotting factor C (3.4.21.84)



C12Y 304/21085	..	Limulus clotting factor B (3.4.21.85)
C12Y 304/21086	..	Limulus clotting enzyme (3.4.21.86)
C12Y 304/21088	..	Repressor LexA (3.4.21.88)
C12Y 304/21089	..	Signal peptidase I (3.4.21.89)
C12Y 304/2109	..	Togavirin (3.4.21.90)
C12Y 304/21091	..	Flavivirin (3.4.21.91)
C12Y 304/21092	..	Endopeptidase Clp (3.4.21.92)
C12Y 304/21093	..	Proprotein convertase 1 (3.4.21.93)
C12Y 304/21094	..	Proprotein convertase 2 (3.4.21.94), i.e. prohormone convertase 2
C12Y 304/21095	..	Snake venom factor V activator (3.4.21.95)
C12Y 304/21096	..	Lactocepin (3.4.21.96)
C12Y 304/21097	..	Assemblin (3.4.21.97)
C12Y 304/21098	..	Hepacivirin (3.4.21.98)
C12Y 304/21099	..	Spermosin (3.4.21.99)
C12Y 304/211	..	Sedolisin (3.4.21.100)
C12Y 304/21101	..	Xanthomonalisin (3.4.21.101)
C12Y 304/21102	..	C-terminal processing peptidase (3.4.21.102)
C12Y 304/21103	..	Physarolisin (3.4.21.103), i.e. physaropepsin
C12Y 304/21104	..	Mannan-binding lectin-associated serine protease-2 (3.4.21.104)
C12Y 304/21105	..	Rhomboid protease (3.4.21.105)
C12Y 304/21106	..	Hepsin (3.4.21.106)
C12Y 304/21107	..	Peptidase Do (3.4.21.107)
C12Y 304/21108	..	HtrA2 peptidase (3.4.21.108)
C12Y 304/21109	..	Matriptase (3.4.21.109)
C12Y 304/2111	..	C5a peptidase (3.4.21.110)
C12Y 304/21111	..	Aqualysin 1 (3.4.21.111)
C12Y 304/21112	..	Site-1 protease (3.4.21.112), i.e. subtilisin kexin isozyme-1
C12Y 304/21113	..	Pestivirus NS3 polyprotein peptidase (3.4.21.113)
C12Y 304/21114	..	Equine arterivirus serine peptidase (3.4.21.114)
C12Y 304/21115	..	Infectious pancreatic necrosis birnavirus Vp4 peptidase (3.4.21.115)
C12Y 304/21116	..	SpoIVB peptidase (3.4.21.116)
C12Y 304/21117	..	Stratum corneum chymotryptic enzyme (3.4.21.117)
C12Y 304/21118	..	Kallikrein 8 (3.4.21.118)
C12Y 304/21119	..	Kallikrein 13 (3.4.21.119)
C12Y 304/2112	..	Oviductin (3.4.21.120)
C12Y 304/21826	..	Proprotein convertase 5 (3.4.21.B26)
C12Y 304/22	.	Cysteine endopeptidases (3.4.22)
C12Y 304/22001	..	Cathepsin B (3.4.22.1)
C12Y 304/22002	..	Papain (3.4.22.2)

C12Y 304/22003	..	Ficain (3.4.22.3)
C12Y 304/22004	..	Bromelain (3.4.22.4) ( <a href="#">C12Y 304/22032</a> or <a href="#">C12Y 304/22033</a> takes precedence )
C12Y 304/22006	..	Chymopapain (3.4.22.6)
C12Y 304/22007	..	Asclepain (3.4.22.7)
C12Y 304/22008	..	Clostripain (3.4.22.8)
C12Y 304/2201	..	Streptopain (3.4.22.10)
C12Y 304/22014	..	Actinidain (3.4.22.14)
C12Y 304/22015	..	Cathepsin L (3.4.22.15)
C12Y 304/22016	..	Cathepsin H (3.4.22.16)
C12Y 304/22017	..	Calpain (3.4.22.17) ( <a href="#">C12Y 304/22052</a> , <a href="#">C12Y 304/22053</a> take precedence )
C12Y 304/22024	..	Cathepsin T (3.4.22.24)
C12Y 304/22025	..	Glycyl endopeptidase (3.4.22.25)
C12Y 304/22026	..	Cancer procoagulant (3.4.22.26)
C12Y 304/22027	..	Cathepsin S (3.4.22.27)
C12Y 304/22028	..	Picornain 3C (3.4.22.28)
C12Y 304/22029	..	Picornain 2A (3.4.22.29)
C12Y 304/2203	..	Caricain (3.4.22.30)
C12Y 304/22031	..	Ananain (3.4.22.31)
C12Y 304/22032	..	Stem bromelain (3.4.22.32)
C12Y 304/22033	..	Fruit bromelain (3.4.22.33), i.e. juice bromelain
C12Y 304/22034	..	Legumain (3.4.22.34), i.e. asparaginyl endopeptidase
C12Y 304/22035	..	Histolysain (3.4.22.35)
C12Y 304/22036	..	Caspase-1 (3.4.22.36), i.e. interleukin-1-beta-convertase
C12Y 304/22037	..	Gingipain R (3.4.22.37)
C12Y 304/22038	..	Cathepsin K (3.4.22.38)
C12Y 304/22039	..	Adenain (3.4.22.39)
C12Y 304/2204	..	Bleomycin hydrolase (3.4.22.40)
C12Y 304/22041	..	Cathepsin F (3.4.22.41)
C12Y 304/22042	..	Cathepsin O (3.4.22.42)
C12Y 304/22043	..	Cathepsin V (3.4.22.43)
C12Y 304/22044	..	Nuclear-inclusion-a endopeptidase (3.4.22.44)
C12Y 304/22045	..	Helper-component proteinase (3.4.22.45)
C12Y 304/22046	..	L-Peptidase (3.4.22.46)
C12Y 304/22047	..	Gingipain K (3.4.22.47)
C12Y 304/22048	..	Staphopain (3.4.22.48)
C12Y 304/22049	..	Separase (3.4.22.49)
C12Y 304/2205	..	V-Cath endopeptidase (3.4.22.50)
C12Y 304/22051	..	Cruzipain (3.4.22.51)
C12Y 304/22052	..	Calpain-1 (3.4.22.52)
C12Y 304/22053	..	Calpain-2 (3.4.22.53), i.e. m-calpain

C12Y 304/22054	..	Calpain-3 (3.4.22.54), i.e. calpain p94
C12Y 304/22055	..	Caspase-2 (3.4.22.55)
C12Y 304/22056	..	Caspase-3 (3.4.22.56)
C12Y 304/22057	..	Caspase-4 (3.4.22.57)
C12Y 304/22058	..	Caspase-5 (3.4.22.58)
C12Y 304/22059	..	Caspase-6 (3.4.22.59)
C12Y 304/2206	..	Caspase-7 (3.4.22.60)
C12Y 304/22061	..	Caspase-8 (3.4.22.61)
C12Y 304/22062	..	Caspase-9 (3.4.22.62)
C12Y 304/22063	..	Caspase-10 (3.4.22.63)
C12Y 304/22064	..	Caspase-11 (3.4.22.64)
C12Y 304/22065	..	Peptidase 1 (mite) (3.4.22.65)
C12Y 304/22066	..	Calicivirin (3.4.22.66)
C12Y 304/22067	..	Zingipain (3.4.22.67)
C12Y 304/22068	..	Ulp1 peptidase (3.4.22.68)
C12Y 304/22069	..	SARS coronavirus main proteinase (3.4.22.69)
C12Y 304/2207	..	Sortase A (3.4.22.70)
C12Y 304/22071	..	Sortase B (3.4.22.71)
C12Y 304/23	.	Aspartic endopeptidases (3.4.23)
C12Y 304/23001	..	Pepsin A (3.4.23.1)
C12Y 304/23002	..	Pepsin B (3.4.23.2)
C12Y 304/23003	..	Gastricsin (3.4.23.3)
C12Y 304/23004	..	Chymosin (3.4.23.4), i.e. rennin
C12Y 304/23005	..	Cathepsin D (3.4.23.5)
C12Y 304/23006	..	Microbial carboxyl proteinases (3.4.23.6) ( <a href="#">C12Y 304/23018</a> - <a href="#">C12Y 304/23028</a> or <a href="#">C12Y 304/2303</a> takes precedence )
C12Y 304/23012	..	Nepenthesin (3.4.23.12)
C12Y 304/23015	..	Renin (3.4.23.15)
C12Y 304/23016	..	HIV-1 retropepsin (3.4.23.16)
C12Y 304/23017	..	Pro-opiomelanocortin converting enzyme (3.4.23.17)
C12Y 304/23018	..	Aspergillopepsin I (3.4.23.18)
C12Y 304/23019	..	Aspergillopepsin II (3.4.23.19)
C12Y 304/2302	..	Penicillopepsin (3.4.23.20)
C12Y 304/23021	..	Rhizopuspepsin (3.4.23.21)
C12Y 304/23022	..	Endothiapepsin (3.4.23.22)
C12Y 304/23023	..	Mucorpepsin (3.4.23.23)
C12Y 304/23024	..	Candidapepsin (3.4.23.24)
C12Y 304/23025	..	Saccharopepsin (3.4.23.25), i.e. yeast proteinase A
C12Y 304/23026	..	Rhodotorulapepsin (3.4.23.26)
C12Y 304/23028	..	Acrocylindropepsin (3.4.23.28)

C12Y 304/23029	..	Polyporopepsin (3.4.23.29)
C12Y 304/2303	..	Pycnoporopepsin (3.4.23.30)
C12Y 304/23031	..	Scytalidopepsin A (3.4.23.31)
C12Y 304/23032	..	Scytalidopepsin B (3.4.23.32)
C12Y 304/23034	..	Cathepsin E (3.4.23.34)
C12Y 304/23035	..	Barrierpepsin (3.4.23.35)
C12Y 304/23036	..	Signal peptidase II (3.4.23.36)
C12Y 304/23038	..	Plasmepsin I (3.4.23.38)
C12Y 304/23039	..	Plasmepsin II (3.4.23.39)
C12Y 304/2304	..	Phytopsin (3.4.23.40)
C12Y 304/23041	..	Yapsin 1 (3.4.23.41)
C12Y 304/23042	..	Thermopsin (3.4.23.42)
C12Y 304/23043	..	Prepilin peptidase (3.4.23.43)
C12Y 304/23044	..	Nodavirus endopeptidase (3.4.23.44)
C12Y 304/23045	..	Memapsin 1 (3.4.23.45), i.e. beta-secretase 2 or BACE2
C12Y 304/23046	..	Memapsin 2 (3.4.23.46), i.e. beta-secretase 1 or BACE
C12Y 304/23047	..	HIV-2 retropepsin (3.4.23.47)
C12Y 304/23048	..	Plasminogen activator Pla (3.4.23.48)
C12Y 304/23049	..	Omptin (3.4.23.49)
C12Y 304/2305	..	Human endogenous retrovirus K endopeptidase (3.4.23.50)
C12Y 304/23051	..	Hycl peptidase (3.4.23.51)
C12Y 304/23052	..	Preflagellin peptidase (3.4.23.52)
C12Y 304/24	.	Metalloendopeptidases (3.4.24)
C12Y 304/24001	..	Atrolysin A (3.4.24.1)
C12Y 304/24003	..	Microbial collagenase (3.4.24.3)
C12Y 304/24004	..	Microbial metalloproteinases (3.4.24.4) ( <a href="#">C12Y 304/24025</a> - <a href="#">C12Y 304/24032</a> , <a href="#">C12Y 304/24039</a> or <a href="#">C12Y 304/2404</a> takes precedence )
C12Y 304/24005	..	Lens neutral proteinase (3.4.24.5) ( <a href="#">C12Y 304/22052</a> , <a href="#">C12Y 304/22053</a> , <a href="#">C12Y 304/25001</a> take precedence )
C12Y 304/24006	..	Leucolysin (3.4.24.6)
C12Y 304/24007	..	Interstitial collagenase (3.4.24.7), i.e. matrix metalloprotease 1 or MMP1
C12Y 304/24011	..	Nepilysin (3.4.24.11), i.e. enkephalinase or neutral endopeptidase 24.11
C12Y 304/24012	..	Envelysin (3.4.24.12)
C12Y 304/24013	..	IgA-specific metalloendopeptidase (3.4.24.13)
C12Y 304/24014	..	Procollagen N-endopeptidase (3.4.24.14)
C12Y 304/24015	..	Thimet oligopeptidase (3.4.24.15)
C12Y 304/24016	..	Neurolysin (3.4.24.16)
C12Y 304/24017	..	Stromelysin 1 (3.4.24.17)
C12Y 304/24018	..	Meprin A (3.4.24.18)
C12Y 304/24019	..	Procollagen C-endopeptidase (3.4.24.19)

C12Y 304/2402	..	Peptidyl-Lys metalloendopeptidase (3.4.24.20)
C12Y 304/24021	..	Astacin (3.4.24.21)
C12Y 304/24022	..	Stromelysin 2 (3.4.24.22)
C12Y 304/24023	..	Matrilysin (3.4.24.23)
C12Y 304/24024	..	Gelatinase A (3.4.24.24), i.e. matrix metalloproteinase 2 or MMP2
C12Y 304/24025	..	Vibriolysin (3.4.24.25)
C12Y 304/24026	..	Pseudolysin (3.4.24.26)
C12Y 304/24027	..	Thermolysin (3.4.24.27)
C12Y 304/24028	..	Bacillolysin (3.4.24.28)
C12Y 304/24029	..	Aureolysin (3.4.24.29)
C12Y 304/2403	..	Coccolysin (3.4.24.30)
C12Y 304/24031	..	Mycolysin (3.4.24.31)
C12Y 304/24032	..	Beta-lytic metalloendopeptidase (3.4.24.32)
C12Y 304/24033	..	Peptidyl-Asp metalloendopeptidase (3.4.24.33)
C12Y 304/24034	..	Neutrophil collagenase (3.4.24.34)
C12Y 304/24035	..	Gelatinase B (3.4.24.35), i.e. matrix metalloprotease 9 or MMP9
C12Y 304/24036	..	Leishmanolysin (3.4.24.36)
C12Y 304/24037	..	Saccharolysin (3.4.24.37), i.e. yeast cysteine proteinase D
C12Y 304/24038	..	Gametolysin (3.4.24.38), i.e. cell wall lytic enzyme
C12Y 304/24039	..	Deuterolysin (3.4.24.39)
C12Y 304/2404	..	Serralysin (3.4.24.40)
C12Y 304/24041	..	Atrolysin B (3.4.24.41)
C12Y 304/24042	..	Atrolysin C (3.4.24.42)
C12Y 304/24043	..	Atroxase (3.4.24.43)
C12Y 304/24044	..	Atrolysin E (3.4.24.44)
C12Y 304/24045	..	Atrolysin F (3.4.24.45)
C12Y 304/24046	..	Adamalysin (3.4.24.46)
C12Y 304/24047	..	Horriolysin (3.4.24.47)
C12Y 304/24048	..	Ruberlysin (3.4.24.48)
C12Y 304/24049	..	Bothropasin (3.4.24.49)
C12Y 304/2405	..	Bothrolysin (3.4.24.50)
C12Y 304/24051	..	Ophiolysin (3.4.24.51)
C12Y 304/24052	..	Trimerelysin I (3.4.24.52)
C12Y 304/24053	..	Trimerelysin II (3.4.24.53)
C12Y 304/24054	..	Mucrolysin (3.4.24.54)
C12Y 304/24055	..	Pitrilysin (3.4.24.55)
C12Y 304/24056	..	Insulysin (3.4.24.56)
C12Y 304/24057	..	O-Sialoglycoprotein endopeptidase (3.4.24.57), i.e. glycoprotease
C12Y 304/24058	..	Russellysin (3.4.24.58)
C12Y 304/24059	..	Mitochondrial intermediate peptidase (3.4.24.59)

C12Y 304/2406	..	Dactylisin (3.4.24.60)
C12Y 304/24061	..	Nardilysin (3.4.24.61)
C12Y 304/24062	..	Magnolysin (3.4.24.62)
C12Y 304/24063	..	Meprin B (3.4.24.63)
C12Y 304/24064	..	Mitochondrial processing peptidase (3.4.24.64)
C12Y 304/24065	..	Macrophage elastase (3.4.24.65), i.e. metalloelastase
C12Y 304/24066	..	Choriolysin L (3.4.24.66)
C12Y 304/24067	..	Choriolysin H (3.4.24.67)
C12Y 304/24068	..	Tentoxilysin (3.4.24.68), i.e. tetanus neurotoxin
C12Y 304/24069	..	Bontoxilysin (3.4.24.69), i.e. botulinum neurotoxin
C12Y 304/2407	..	Oligopeptidase A (3.4.24.70)
C12Y 304/24071	..	Endothelin-converting enzyme 1 (3.4.24.71)
C12Y 304/24072	..	Fibrolase (3.4.24.72)
C12Y 304/24073	..	Jararhagin (3.4.24.73)
C12Y 304/24074	..	Fragilysin (3.4.24.74)
C12Y 304/24075	..	Lysostaphin (3.4.24.75)
C12Y 304/24076	..	Flavastacin (3.4.24.76)
C12Y 304/24077	..	Snapalysin (3.4.24.77)
C12Y 304/24078	..	GPR endopeptidase (3.4.24.78)
C12Y 304/24079	..	Pappalysin-1 (3.4.24.79)
C12Y 304/2408	..	Membrane-type matrix metalloproteinase-1 (3.4.24.80)
C12Y 304/24081	..	ADAM10 endopeptidase (3.4.24.81)
C12Y 304/24082	..	ADAMTS-4 endopeptidase (3.4.24.82), i.e. aggrecanase 1
C12Y 304/24083	..	Anthrax lethal factor endopeptidase (3.4.24.83)
C12Y 304/24084	..	Ste24 endopeptidase (3.4.24.84)
C12Y 304/24085	..	S2P endopeptidase (3.4.24.85)
C12Y 304/24086	..	ADAM 17 endopeptidase (3.4.24.86), i.e. TNF-alpha converting enzyme
C12Y 304/24087	..	ADAMTS13 endopeptidase (3.4.24.87)
C12Y 304/24812	..	ADAMTS5 endopeptidase (3.4.24.B12) i.e. aggrecanase 2
C12Y 304/25	.	Threonine endopeptidases (3.4.25)
C12Y 304/25001	..	Proteasome endopeptidase complex (3.4.25.1)
C12Y 304/25002	..	HslU--HslV peptidase (3.4.25.2)

### **C12Y 305/00      Hydrolases acting on carbon-nitrogen bonds, other than peptide bonds (3.5)**

C12Y 305/01	.	in linear amides (3.5.1)
C12Y 305/01001	..	Asparaginase (3.5.1.1)
C12Y 305/01002	..	Glutaminase (3.5.1.2)
C12Y 305/01003	..	Omega-amidase (3.5.1.3)



C12Y 305/01004	..	Amidase (3.5.1.4)
C12Y 305/01005	..	Urease (3.5.1.5)
C12Y 305/01006	..	Beta-ureidopropionase (3.5.1.6)
C12Y 305/01007	..	Ureidosuccinase (3.5.1.7)
C12Y 305/01008	..	Formylaspartate deformylase (3.5.1.8)
C12Y 305/01009	..	Arylformamidase (3.5.1.9)
C12Y 305/0101	..	Formyltetrahydrofolate deformylase (3.5.1.10)
C12Y 305/01011	..	Penicillin amidase (3.5.1.11), i.e. penicillin-amidohydrolase
C12Y 305/01012	..	Biotinidase (3.5.1.12)
C12Y 305/01013	..	Aryl-acylamidase (3.5.1.13)
C12Y 305/01014	..	Aminoacylase (3.5.1.14)
C12Y 305/01015	..	Aspartoacylase (3.5.1.15)
C12Y 305/01016	..	Acetylornithine deacetylase (3.5.1.16)
C12Y 305/01017	..	Acyl-lysine deacylase (3.5.1.17)
C12Y 305/01018	..	Succinyl-diaminopimelate desuccinylase (3.5.1.18)
C12Y 305/01019	..	Nicotinamidase (3.5.1.19)
C12Y 305/0102	..	Citrullinase (3.5.1.20)
C12Y 305/01021	..	N-Acetyl-beta-alanine deacetylase (3.5.1.21)
C12Y 305/01022	..	Pantothenase (3.5.1.22)
C12Y 305/01023	..	Ceramidase (3.5.1.23)
C12Y 305/01024	..	Choloylglycine hydrolase (3.5.1.24), i.e. bile salt hydrolase
C12Y 305/01025	..	N-Acetylglucosamine-6-phosphate deacetylase (3.5.1.25)
C12Y 305/01026	..	N4-(Beta-N-acetylglucosaminyl)-L-asparaginase (3.5.1.26)
C12Y 305/01027	..	N-Formylmethionylaminoacyl-tRNA deformylase (3.5.1.27)
C12Y 305/01028	..	N-Acetylmuramoyl-L-alanine amidase (3.5.1.28)
C12Y 305/01029	..	2-(Acetamidomethylene)succinate hydrolase (3.5.1.29)
C12Y 305/0103	..	5-Aminopentanamidase (3.5.1.30)
C12Y 305/01031	..	Formylmethionine deformylase (3.5.1.31)
C12Y 305/01032	..	Hippurate hydrolase (3.5.1.32)
C12Y 305/01033	..	N-Acetylglucosamine deacetylase (3.5.1.33)
C12Y 305/01035	..	D-Glutaminase (3.5.1.35)
C12Y 305/01036	..	N-Methyl-2-oxoglutaramate hydrolase (3.5.1.36)
C12Y 305/01038	..	Glutamin-(asparagin-)ase (3.5.1.38)
C12Y 305/01039	..	Alkylamidase (3.5.1.39)
C12Y 305/0104	..	Acylagmatine amidase (3.5.1.40)
C12Y 305/01041	..	Chitin deacetylase (3.5.1.41)
C12Y 305/01042	..	Nicotinamide-nucleotide amidase (3.5.1.42)
C12Y 305/01043	..	Peptidyl-glutaminase (3.5.1.43)
C12Y 305/01044	..	Protein-glutamine glutaminase (3.5.1.44)
C12Y 305/01046	..	6-Aminohexanoate-dimer hydrolase (3.5.1.46)

C12Y 305/01047	..	N-Acetyldiaminopimelate deacetylase (3.5.1.47)
C12Y 305/01048	..	Acetylspermidine deacetylase (3.5.1.48)
C12Y 305/01049	..	Formamidase (3.5.1.49)
C12Y 305/0105	..	Pentanamidase (3.5.1.50)
C12Y 305/01051	..	4-Acetamidobutyryl-CoA deacetylase (3.5.1.51)
C12Y 305/01052	..	Peptide-N4-(N-acetyl-beta-glucosaminy)asparagine amidase (3.5.1.52), i.e. glycopeptidase
C12Y 305/01053	..	N-carbamoylputrescine amidase (3.5.1.53)
C12Y 305/01054	..	Allophanate hydrolase (3.5.1.54)
C12Y 305/01055	..	Long-chain-fatty-acyl-glutamate deacylase (3.5.1.55)
C12Y 305/01056	..	N,N-Dimethylformamidase (3.5.1.56)
C12Y 305/01057	..	Tryptophanamidase (3.5.1.57)
C12Y 305/01058	..	N-Benzoyloxycarbonylglycine hydrolase (3.5.1.58)
C12Y 305/01059	..	N-Carbamoylsarcosine amidase (3.5.1.59)
C12Y 305/0106	..	N-(Long-chain-acyl)ethanolamine deacylase (3.5.1.60)
C12Y 305/01061	..	Mimosinase (3.5.1.61)
C12Y 305/01062	..	Acetylputrescine deacetylase (3.5.1.62)
C12Y 305/01063	..	4-Acetamidobutyrate deacetylase (3.5.1.63)
C12Y 305/01064	..	Nalpha-benzoyloxycarbonylleucine hydrolase (3.5.1.64)
C12Y 305/01065	..	Theanine hydrolase (3.5.1.65)
C12Y 305/01066	..	2-(Hydroxymethyl)-3-(acetamidomethylene)succinate hydrolase (3.5.1.66)
C12Y 305/01067	..	4-Methyleneglutaminase (3.5.1.67)
C12Y 305/01068	..	N-Formylglutamate deformylase (3.5.1.68)
C12Y 305/01069	..	Glycosphingolipid deacylase (3.5.1.69)
C12Y 305/0107	..	Aculeacin-A deacylase (3.5.1.70)
C12Y 305/01071	..	N-Feruloylglycine deacylase (3.5.1.71)
C12Y 305/01072	..	D-Benzoylarginine-4-nitroanilide amidase (3.5.1.72)
C12Y 305/01073	..	Carnitinamidase (3.5.1.73)
C12Y 305/01074	..	Chenodeoxycholytaurine hydrolase (3.5.1.74)
C12Y 305/01075	..	Urethanase (3.5.1.75)
C12Y 305/01076	..	Arylalkyl acylamidase (3.5.1.76)
C12Y 305/01077	..	N-Carbamoyl-D-amino-acid hydrolase (3.5.1.77)
C12Y 305/01078	..	Glutathionylspermidine amidase (3.5.1.78)
C12Y 305/01079	..	Phthalyl amidase (3.5.1.79)
C12Y 305/01081	..	N-Acyl-D-amino-acid deacylase (3.5.1.81)
C12Y 305/01082	..	N-Acyl-D-glutamate deacylase (3.5.1.82)
C12Y 305/01083	..	N-Acyl-D-aspartate deacylase (3.5.1.83)
C12Y 305/01084	..	Biuret amidohydrolase (3.5.1.84)
C12Y 305/01085	..	(S)-N-Acetyl-1-phenylethylamine hydrolase (3.5.1.85)
C12Y 305/01086	..	Mandelamide amidase (3.5.1.86)

C12Y 305/01087	..	N-Carbamoyl-L-amino-acid hydrolase (3.5.1.87)
C12Y 305/01088	..	Peptide deformylase (3.5.1.88)
C12Y 305/01089	..	N-Acetylglucosaminylphosphatidylinositol deacetylase (3.5.1.89)
C12Y 305/0109	..	Adenosylcobinamide hydrolase (3.5.1.90)
C12Y 305/01091	..	N-Substituted formamide deformylase (3.5.1.91)
C12Y 305/01092	..	Pantetheine hydrolase (3.5.1.92)
C12Y 305/01093	..	Glutaryl-7-aminocephalosporanic-acid acylase (3.5.1.93)
C12Y 305/01094	..	Gamma-glutamyl-gamma-aminobutyrate hydrolase (3.5.1.94)
C12Y 305/01095	..	N-Malonylurea hydrolase (3.5.1.95)
C12Y 305/01096	..	Succinylglutamate desuccinylase (3.5.1.96)
C12Y 305/01097	..	Acyl-homoserine-lactone acylase (3.5.1.97)
C12Y 305/01098	..	Histone deacetylase (3.5.1.98), i.e. sirtuin deacetylase
C12Y 305/01099	..	Fatty acid amide hydrolase (3.5.1.99)
C12Y 305/011	..	(R)-Amidase (3.5.1.100)
C12Y 305/01101	..	L-Proline amide hydrolase (3.5.1.101)
C12Y 305/01102	..	2-Amino-5-formylamino-6-ribosylaminopyrimidin-4(3H)-one 5'-monophosphate deformylase (3.5.1.102)
C12Y 305/01103	..	N-Acetyl-1-D-myo-inositol-2-amino-2-deoxy-alpha-D-glucopyranoside deacetylase (3.5.1.103)
C12Y 305/01104	..	Peptidoglycan-N-acetylglucosamine deacetylase (3.5.1.104)
C12Y 305/01105	..	Chitin disaccharide deacetylase (3.5.1.105)
C12Y 305/01106	..	N-formylmaleamate deformylase (3.5.1.106)
C12Y 305/01107	..	Maleamate amidohydrolase (3.5.1.107)
C12Y 305/01108	..	UDP-3-O-acyl-N-acetylglucosamine deacetylase (3.5.1.108)
C12Y 305/01109	..	Sphingomyelin deacylase (3.5.1.109)
C12Y 305/02	.	in cyclic amides (3.5.2)
C12Y 305/02001	..	Barbiturase (3.5.2.1)
C12Y 305/02002	..	Dihydropyrimidinase (3.5.2.2), i.e. hydantoinase
C12Y 305/02003	..	Dihydroorotase (3.5.2.3)
C12Y 305/02004	..	Carboxymethylhydantoinase (3.5.2.4)
C12Y 305/02005	..	Allantoinase (3.5.2.5)
C12Y 305/02006	..	Beta-lactamase (3.5.2.6)
C12Y 305/02007	..	Imidazolonepropionase (3.5.2.7)
C12Y 305/02009	..	5-Oxoprolinase (ATP-hydrolysing) (3.5.2.9)
C12Y 305/0201	..	Creatininase (3.5.2.10)
C12Y 305/02011	..	L-Lysine-lactamase (3.5.2.11)
C12Y 305/02012	..	6-Aminohexanoate-cyclic-dimer hydrolase (3.5.2.12)
C12Y 305/02013	..	2,5-Dioxopiperazine hydrolase (3.5.2.13)
C12Y 305/02014	..	N-Methylhydantoinase (ATP-hydrolyzing) (3.5.2.14)
C12Y 305/02015	..	Cyanuric acid amidohydrolase (3.5.2.15)

C12Y 305/02016	..	Maleimide hydrolase (3.5.2.16)
C12Y 305/02017	..	Hydroxyisourate hydrolase (3.5.2.17)
C12Y 305/02018	..	Enamidase (3.5.2.18)
C12Y 305/02019	..	Streptothricin hydrolase (3.5.2.19)
C12Y 305/03	.	in linear amidines (3.5.3)
C12Y 305/03001	..	Arginase (3.5.3.1)
C12Y 305/03002	..	Guanidinoacetase (3.5.3.2)
C12Y 305/03003	..	Creatinase (3.5.3.3), i.e. creatine amidinohydrolase
C12Y 305/03004	..	Allantoicase (3.5.3.4)
C12Y 305/03005	..	Formimidoylaspartate deiminase (3.5.3.5)
C12Y 305/03006	..	Arginine deiminase (3.5.3.6)
C12Y 305/03007	..	Guanidinobutyrase (3.5.3.7)
C12Y 305/03008	..	Formimidoylglutamase (3.5.3.8)
C12Y 305/03009	..	Allantoate deiminase (3.5.3.9)
C12Y 305/0301	..	D-Arginase (3.5.3.10)
C12Y 305/03011	..	Agmatinase (3.5.3.11)
C12Y 305/03012	..	Agmatine deiminase (3.5.3.12)
C12Y 305/03013	..	Formimidoylglutamate deiminase (3.5.3.13)
C12Y 305/03014	..	Amidinoaspartase (3.5.3.14)
C12Y 305/03015	..	Protein-arginine deiminase (3.5.3.15)
C12Y 305/03016	..	Methylguanidinase (3.5.3.16)
C12Y 305/03017	..	Guanidinopropionase (3.5.3.17)
C12Y 305/03018	..	Dimethylargininase (3.5.3.18)
C12Y 305/03019	..	Ureidoglycolate hydrolase (3.5.3.19)
C12Y 305/0302	..	Diguanidinobutanase (3.5.3.20)
C12Y 305/03021	..	Methylenediurea deaminase (3.5.3.21)
C12Y 305/03022	..	Proclavamate amidinohydrolase (3.5.3.22)
C12Y 305/03023	..	N-Succinylarginine dihydrolase (3.5.3.23)
C12Y 305/04	.	in cyclic amidines (3.5.4)
C12Y 305/04001	..	Cytosine deaminase (3.5.4.1)
C12Y 305/04002	..	Adenine deaminase (3.5.4.2)
C12Y 305/04003	..	Guanine deaminase (3.5.4.3)
C12Y 305/04004	..	Adenosine deaminase (3.5.4.4)
C12Y 305/04005	..	Cytidine deaminase (3.5.4.5)
C12Y 305/04006	..	AMP deaminase (3.5.4.6)
C12Y 305/04007	..	ADP deaminase (3.5.4.7)
C12Y 305/04008	..	Aminoimidazolase (3.5.4.8)
C12Y 305/04009	..	Methenyltetrahydrofolate cyclohydrolase (3.5.4.9)
C12Y 305/0401	..	IMP cyclohydrolase (3.5.4.10)

C12Y 305/04011	..	Pterin deaminase (3.5.4.11)
C12Y 305/04012	..	dCMP deaminase (3.5.4.12)
C12Y 305/04013	..	dCTP deaminase (3.5.4.13)
C12Y 305/04014	..	Deoxycytidine deaminase (3.5.4.14)
C12Y 305/04015	..	Guanosine deaminase (3.5.4.15)
C12Y 305/04016	..	GTP cyclohydrolase I (3.5.4.16)
C12Y 305/04017	..	Adenosine-phosphate deaminase (3.5.4.17)
C12Y 305/04018	..	ATP deaminase (3.5.4.18)
C12Y 305/04019	..	Phosphoribosyl-AMP cyclohydrolase (3.5.4.19)
C12Y 305/0402	..	Pyriithiamine deaminase (3.5.4.20)
C12Y 305/04021	..	Creatinine deaminase (3.5.4.21)
C12Y 305/04022	..	1-Pyrroline-4-hydroxy-2-carboxylate deaminase (3.5.4.22)
C12Y 305/04023	..	Blasticidin-S deaminase (3.5.4.23)
C12Y 305/04024	..	Sepiapterin deaminase (3.5.4.24)
C12Y 305/04025	..	GTP cyclohydrolase II (3.5.4.25)
C12Y 305/04026	..	Diaminohydroxyphosphoribosylaminopyrimidine deaminase (3.5.4.26)
C12Y 305/04027	..	Methenyltetrahydromethanopterin cyclohydrolase (3.5.4.27)
C12Y 305/04028	..	S-Adenosylhomocysteine deaminase (3.5.4.28)
C12Y 305/04029	..	GTP cyclohydrolase IIa (3.5.4.29)
C12Y 305/0403	..	dCTP deaminase (dUMP-forming) (3.5.4.30)
C12Y 305/04031	..	S-Methyl-5'-thioadenosine deaminase (3.5.4.31)
C12Y 305/05	.	in nitriles (3.5.5)
C12Y 305/05001	..	Nitrilase (3.5.5.1)
C12Y 305/05002	..	Ricinine nitrilase (3.5.5.2)
C12Y 305/05004	..	Cyanoalanine nitrilase (3.5.5.4)
C12Y 305/05005	..	Arylacetonitrilase (3.5.5.5)
C12Y 305/05006	..	Bromoxynil nitrilase (3.5.5.6)
C12Y 305/05007	..	Aliphatic nitrilase (3.5.5.7)
C12Y 305/05008	..	Thiocyanate hydrolase (3.5.5.8)
C12Y 305/99	.	in other compounds (3.5.99)
C12Y 305/99001	..	Riboflavinase (3.5.99.1)
C12Y 305/99002	..	Thiaminase (3.5.99.2)
C12Y 305/99003	..	Hydroxydechloroatrazine ethylaminohydrolase (3.5.99.3)
C12Y 305/99004	..	N-isopropylammelide isopropylaminohydrolase (3.5.99.4)
C12Y 305/99005	..	2-Aminomuconate deaminase (3.5.99.5)
C12Y 305/99006	..	Glucosamine-6-phosphate deaminase (3.5.99.6)
C12Y 305/99007	..	1-Aminocyclopropane-1-carboxylate deaminase (3.5.99.7)
C12Y 305/99008	..	5-Nitroanthranilic acid aminohydrolase (3.5.99.8)

**C12Y 306/00****Hydrolases acting on acid anhydrides (3.6)**

- C12Y 306/01 . in phosphorus-containing anhydrides (3.6.1)
- C12Y 306/01001 .. Inorganic diphosphatase (3.6.1.1)
- C12Y 306/01002 .. Trimetaphosphatase (3.6.1.2)
- C12Y 306/01003 .. Adenosine triphosphatase (3.6.1.3)
- C12Y 306/01005 .. Apyrase (3.6.1.5), i.e. ATP diphosphohydrolase
- C12Y 306/01006 .. Nucleoside-diphosphatase (3.6.1.6)
- C12Y 306/01007 .. Acylphosphatase (3.6.1.7)
- C12Y 306/01008 .. ATP diphosphatase (3.6.1.8)
- C12Y 306/01009 .. Nucleotide diphosphatase (3.6.1.9), i.e. nucleotide-pyrophosphatase
- C12Y 306/0101 .. Endopolyphosphatase (3.6.1.10)
- C12Y 306/01011 .. Exopolyphosphatase (3.6.1.11)
- C12Y 306/01012 .. dCTP diphosphatase (3.6.1.12)
- C12Y 306/01013 .. ADP-ribose diphosphatase (3.6.1.13)
- C12Y 306/01014 .. Adenosine-tetraphosphatase (3.6.1.14)
- C12Y 306/01015 .. Nucleoside-triphosphatase (3.6.1.15)
- C12Y 306/01016 .. CDP-glycerol diphosphatase (3.6.1.16)
- C12Y 306/01017 .. Bis(5'-nucleosyl)-tetraphosphatase (asymmetrical) (3.6.1.17)
- C12Y 306/01018 .. FAD diphosphatase (3.6.1.18)
- C12Y 306/01019 .. Nucleoside-triphosphate diphosphatase (3.6.1.19)
- C12Y 306/0102 .. 5'-Acylphosphoadenosine hydrolase (3.6.1.20)
- C12Y 306/01021 .. ADP-sugar diphosphatase (3.6.1.21)
- C12Y 306/01022 .. NAD<sup>+</sup> diphosphatase (3.6.1.22)
- C12Y 306/01023 .. dUTP diphosphatase (3.6.1.23)
- C12Y 306/01024 .. Nucleoside phosphoacylhydrolase (3.6.1.24)
- C12Y 306/01025 .. Triphosphatase (3.6.1.25)
- C12Y 306/01026 .. CDP-diacylglycerol diphosphatase (3.6.1.26)
- C12Y 306/01027 .. Undecaprenyl-diphosphatase (3.6.1.27)
- C12Y 306/01028 .. Thiamine-triphosphatase (3.6.1.28)
- C12Y 306/01029 .. Bis(5'-adenosyl)-triphosphatase (3.6.1.29)
- C12Y 306/0103 .. M7G(5')pppN diphosphatase (3.6.1.30)
- C12Y 306/01031 .. Phosphoribosyl-ATP diphosphatase (3.6.1.31)
- C12Y 306/01039 .. Thymidine-triphosphatase (3.6.1.39), i.e. T4 helicase
- C12Y 306/0104 .. Guanosine-5'-triphosphate,3'-diphosphate diphosphatase (3.6.1.40)
- C12Y 306/01041 .. Bis(5'-nucleosyl)-tetraphosphatase (symmetrical) (3.6.1.41)
- C12Y 306/01042 .. Guanosine-diphosphatase (3.6.1.42)
- C12Y 306/01043 .. Dolichyldiphosphatase (3.6.1.43)
- C12Y 306/01044 .. Oligosaccharide-diphosphodolichol diphosphatase (3.6.1.44)



C12Y 306/01045	..	UDP-sugar diphosphatase (3.6.1.45)
C12Y 306/01052	..	Diphosphoinositol-polyphosphate diphosphatase (3.6.1.52)
C12Y 306/01053	..	Mn <sup>2+</sup> -dependent ADP-ribose/CDP-alcohol diphosphatase (3.6.1.53)
C12Y 306/01054	..	UDP-2,3-diacylglycerolamine diphosphatase (3.6.1.54)
C12Y 306/01055	..	8-Oxo-dGTP diphosphatase (3.6.1.55)
C12Y 306/01056	..	2-Hydroxy-dATP diphosphatase (3.6.1.56)
C12Y 306/01057	..	UDP-2,4-diacetamido-2,4,6-trideoxy-beta-L-altropyranose hydrolase (3.6.1.57)
C12Y 306/02	.	in sulfonyl-containing anhydrides (3.6.2)
C12Y 306/02001	..	Adenylylsulfatase (3.6.2.1)
C12Y 306/02002	..	Phosphoadenylylsulfatase (3.6.2.2)
C12Y 306/03	.	acting on acid anhydrides; catalysing transmembrane movement of substances (3.6.3)
C12Y 306/03001	..	Phospholipid-translocating ATPase (3.6.3.1), i.e. Mg <sup>2+</sup> -ATPase
C12Y 306/03002	..	Mg <sup>2+</sup> -importing ATPase (3.6.3.2)
C12Y 306/03003	..	Cd <sup>2+</sup> -exporting ATPase (3.6.3.3)
C12Y 306/03004	..	Cu <sup>2+</sup> -exporting ATPase (3.6.3.4)
C12Y 306/03005	..	Zn <sup>2+</sup> -exporting ATPase (3.6.3.5)
C12Y 306/03006	..	H <sup>+</sup> -exporting ATPase (3.6.3.6)
C12Y 306/03007	..	Na <sup>+</sup> -exporting ATPase (3.6.3.7)
C12Y 306/03008	..	Ca <sup>2+</sup> -transporting ATPase (3.6.3.8)
C12Y 306/03009	..	Na <sup>+</sup> /K <sup>+</sup> -exchanging ATPase (3.6.3.9)
C12Y 306/0301	..	H <sup>+</sup> /K <sup>+</sup> -exchanging ATPase (3.6.3.10)
C12Y 306/03011	..	Cl <sup>-</sup> -transporting ATPase (3.6.3.11)
C12Y 306/03012	..	K <sup>+</sup> -transporting ATPase (3.6.3.12)
C12Y 306/03014	..	H <sup>+</sup> -transporting two-sector ATPase (3.6.3.14), i.e. F1 ATPase
C12Y 306/03015	..	Na <sup>+</sup> -transporting two-sector ATPase (3.6.3.15)
C12Y 306/03016	..	Arsenite-transporting ATPase (3.6.3.16)
C12Y 306/03017	..	Monosaccharide-transporting ATPase (3.6.3.17)
C12Y 306/03018	..	Oligosaccharide-transporting ATPase (3.6.3.18)
C12Y 306/03019	..	Maltose-transporting ATPase (3.6.3.19)
C12Y 306/0302	..	Glycerol-3-phosphate-transporting ATPase (3.6.3.20)
C12Y 306/03021	..	Polar-amino-acid-transporting ATPase (3.6.3.21)
C12Y 306/03022	..	Nonpolar-amino-acid-transporting ATPase (3.6.3.22)
C12Y 306/03023	..	Oligopeptide-transporting ATPase (3.6.3.23)
C12Y 306/03024	..	Nickel-transporting ATPase (3.6.3.24)
C12Y 306/03025	..	Sulfate-transporting ATPase (3.6.3.25)
C12Y 306/03026	..	Nitrate-transporting ATPase (3.6.3.26)
C12Y 306/03027	..	Phosphate-transporting ATPase (3.6.3.27)
C12Y 306/03028	..	Phosphonate-transporting ATPase (3.6.3.28)
C12Y 306/03029	..	Molybdate-transporting ATPase (3.6.3.29)

C12Y 306/0303	..	Fe <sup>3+</sup> -transporting ATPase (3.6.3.30)
C12Y 306/03031	..	Polyamine-transporting ATPase (3.6.3.31)
C12Y 306/03032	..	Quaternary-amine-transporting ATPase (3.6.3.32)
C12Y 306/03033	..	Vitamin B12-transporting ATPase (3.6.3.33)
C12Y 306/03034	..	Iron-chelate-transporting ATPase (3.6.3.34)
C12Y 306/03035	..	Manganese-transporting ATPase (3.6.3.35)
C12Y 306/03036	..	Taurine-transporting ATPase (3.6.3.36)
C12Y 306/03037	..	Guanine-transporting ATPase (3.6.3.37)
C12Y 306/03038	..	Capsular-polysaccharide-transporting ATPase (3.6.3.38)
C12Y 306/03039	..	Lipopolysaccharide-transporting ATPase (3.6.3.39)
C12Y 306/0304	..	Teichoic-acid-transporting ATPase (3.6.3.40)
C12Y 306/03041	..	Heme-transporting ATPase (3.6.3.41)
C12Y 306/03042	..	Beta-glucan-transporting ATPase (3.6.3.42)
C12Y 306/03043	..	Peptide-transporting ATPase (3.6.3.43)
C12Y 306/03044	..	Xenobiotic-transporting ATPase (3.6.3.44)
C12Y 306/03046	..	Cadmium-transporting ATPase (3.6.3.46)
C12Y 306/03047	..	Fatty-acyl-CoA-transporting ATPase (3.6.3.47)
C12Y 306/03048	..	Alpha-factor-transporting ATPase (3.6.3.48)
C12Y 306/03049	..	Channel-conductance-controlling ATPase (3.6.3.49)
C12Y 306/0305	..	Protein-secreting ATPase (3.6.3.50)
C12Y 306/03051	..	Mitochondrial protein-transporting ATPase (3.6.3.51)
C12Y 306/03052	..	Chloroplast protein-transporting ATPase (3.6.3.52)
C12Y 306/03053	..	Ag <sup>+</sup> -exporting ATPase (3.6.3.53)
C12Y 306/04	.	acting on acid anhydrides; involved in cellular and subcellular movement (3.6.4)
C12Y 306/04001	..	Myosin ATPase (3.6.4.1)
C12Y 306/04002	..	Dynein ATPase (3.6.4.2)
C12Y 306/04003	..	Microtubule-severing ATPase (3.6.4.3)
C12Y 306/04004	..	Plus-end-directed kinesin ATPase (3.6.4.4)
C12Y 306/04005	..	Minus-end-directed kinesin ATPase (3.6.4.5)
C12Y 306/04006	..	Vesicle-fusing ATPase (3.6.4.6)
C12Y 306/04007	..	Peroxisome-assembly ATPase (3.6.4.7)
C12Y 306/04008	..	Proteasome ATPase (3.6.4.8)
C12Y 306/04009	..	Chaperonin ATPase (3.6.4.9)
C12Y 306/0401	..	Non-chaperonin molecular chaperone ATPase (3.6.4.10)
C12Y 306/04011	..	Nucleoplasmin ATPase (3.6.4.11)
C12Y 306/04012	..	DNA helicase (3.6.4.12)
C12Y 306/04013	..	RNA helicase (3.6.4.13)
C12Y 306/05	.	acting on GTP; involved in cellular and subcellular movement (3.6.5)
C12Y 306/05001	..	Heterotrimeric G-protein GTPase (3.6.5.1)

- C12Y 306/05002 .. Small monomeric GTPase (3.6.5.2)
- C12Y 306/05003 .. Protein-synthesizing GTPase (3.6.5.3)
- C12Y 306/05004 .. Signal-recognition-particle GTPase (3.6.5.4)
- C12Y 306/05005 .. Dynamin GTPase (3.6.5.5)
- C12Y 306/05006 .. Tubulin GTPase (3.6.5.6)

### **C12Y 307/00      Hydrolases acting on carbon-carbon bonds (3.7)**

- C12Y 307/01 .. in ketonic substances (3.7.1)
- C12Y 307/01001 .. Oxaloacetase (3.7.1.1)
- C12Y 307/01002 .. Fumarylacetoacetase (3.7.1.2)
- C12Y 307/01003 .. Kynureninase (3.7.1.3)
- C12Y 307/01004 .. Phloretin hydrolase (3.7.1.4)
- C12Y 307/01005 .. Acylpyruvate hydrolase (3.7.1.5)
- C12Y 307/01006 .. Acetylpyruvate hydrolase (3.7.1.6)
- C12Y 307/01007 .. Beta-diketone hydrolase (3.7.1.7)
- C12Y 307/01008 .. 2,6-Dioxo-6-phenylhexa-3-enoate hydrolase (3.7.1.8)
- C12Y 307/01009 .. 2-Hydroxymuconate-semialdehyde hydrolase (3.7.1.9)
- C12Y 307/0101 .. Cyclohexane-1,3-dione hydrolase (3.7.1.10)
- C12Y 307/01011 .. Cyclohexane-1,2-dione hydrolase (3.7.1.11)
- C12Y 307/01012 .. Cobalt-precorrin 5A hydrolase (3.7.1.12)
- C12Y 307/01013 .. 2-Hydroxy-6-oxo-6-(2-aminophenyl)hexa-2,4-dienoate hydrolase (3.7.1.13)
- C12Y 307/01014 .. 2-Hydroxy-6-oxonona-2,4-dienedioate hydrolase (3.7.1.14)
- C12Y 307/01015 .. (+)-Caryolan-1-ol synthase (3.7.1.15)
- C12Y 307/01016 .. Oxepin-CoA hydrolase (3.7.1.16)

### **C12Y 308/00      Hydrolases acting on halide bonds (3.8)**

- C12Y 308/01 .. in C-halide substances (3.8.1)
- C12Y 308/01001 .. Alkylhalidase (3.8.1.1)
- C12Y 308/01002 .. (S)-2-Haloacid dehalogenase (3.8.1.2)
- C12Y 308/01003 .. Haloacetate dehalogenase (3.8.1.3)
- C12Y 308/01005 .. Haloalkane dehalogenase (3.8.1.5)
- C12Y 308/01006 .. 4-Chlorobenzoate dehalogenase (3.8.1.6)
- C12Y 308/01007 .. 4-Chlorobenzoyl-CoA dehalogenase (3.8.1.7)
- C12Y 308/01008 .. Atrazine chlorohydrolase (3.8.1.8)
- C12Y 308/01009 .. (R)-2-Haloacid dehalogenase (3.8.1.9)
- C12Y 308/0101 .. 2-Haloacid dehalogenase (configuration-inverting) (3.8.1.10)
- C12Y 308/01011 .. 2-Haloacid dehalogenase (configuration-retaining) (3.8.1.11)

**C12Y 309/00      Hydrolases acting on phosphorus-nitrogen bonds (3.9)**

- C12Y 309/01      .    acting on phosphorus-nitrogen bonds (3.9.1)
- C12Y 309/01001    ..    Phosphoamidase (3.9.1.1)

**C12Y 310/00      Hydrolases acting on sulfur-nitrogen bonds (3.10)**

- C12Y 310/01      .    acting on sulfur-nitrogen bonds (3.10.1)
- C12Y 310/01001    ..    N-Sulfoglucosamine sulfohydrolase (3.10.1.1)
- C12Y 310/01002    ..    Cyclamate sulfohydrolase (3.10.1.2)

**C12Y 311/00      Hydrolases acting on carbon-phosphorus bonds (3.11)**

- C12Y 311/01      .    acting on carbon-phosphorus bonds (3.11.1)
- C12Y 311/01001    ..    Phosphonoacetaldehyde hydrolase (3.11.1.1)
- C12Y 311/01002    ..    Phosphonoacetate hydrolase (3.11.1.2)
- C12Y 311/01003    ..    Phosphonopyruvate hydrolase (3.11.1.3)

**C12Y 312/00      Hydrolases acting on sulfur-sulfur bonds (3.12)**

- C12Y 312/01      .    acting on sulfur-sulfur bonds (3.12.1)
- C12Y 312/01001    ..    Trithionate hydrolase (3.12.1.1)

**C12Y 313/00      Hydrolases acting on carbon-sulfur bonds (3.13)**

- C12Y 313/01      .    acting on carbon-sulfur bonds (3.13.1)
- C12Y 313/01001    ..    UDP-sulfoquinovose synthase (3.13.1.1)
- C12Y 313/01003    ..    2'-Hydroxybiphenyl-2-sulfinase (3.13.1.3)

**C12Y 401/00      Carbon-carbon lyases (4.1)**

- C12Y 401/01      .    Carboxy-lyases (4.1.1)
- C12Y 401/01001    ..    Pyruvate decarboxylase (4.1.1.1)
- C12Y 401/01002    ..    Oxalate decarboxylase (4.1.1.2)
- C12Y 401/01003    ..    Oxaloacetate decarboxylase (4.1.1.3)
- C12Y 401/01004    ..    Acetoacetate decarboxylase (4.1.1.4)
- C12Y 401/01005    ..    Acetolactate decarboxylase (4.1.1.5)
- C12Y 401/01006    ..    Aconitate decarboxylase (4.1.1.6)
- C12Y 401/01007    ..    Benzoylformate decarboxylase (4.1.1.7)
- C12Y 401/01008    ..    Oxalyl-CoA decarboxylase (4.1.1.8)

C12Y 401/01009	..	Malonyl-CoA decarboxylase (4.1.1.9)
C12Y 401/01011	..	Aspartate 1-decarboxylase (4.1.1.11)
C12Y 401/01012	..	Aspartate 4-decarboxylase (4.1.1.12)
C12Y 401/01014	..	Valine decarboxylase (4.1.1.14)
C12Y 401/01015	..	Glutamate decarboxylase (4.1.1.15)
C12Y 401/01016	..	Hydroxyglutamate decarboxylase (4.1.1.16)
C12Y 401/01017	..	Ornithine decarboxylase (4.1.1.17)
C12Y 401/01018	..	Lysine decarboxylase (4.1.1.18)
C12Y 401/01019	..	Arginine decarboxylase (4.1.1.19)
C12Y 401/0102	..	Diaminopimelate decarboxylase (4.1.1.20)
C12Y 401/01021	..	Phosphoribosylaminoimidazole carboxylase (4.1.1.21)
C12Y 401/01022	..	Histidine decarboxylase (4.1.1.22)
C12Y 401/01023	..	Orotidine-5'-phosphate decarboxylase (4.1.1.23)
C12Y 401/01024	..	Aminobenzoate decarboxylase (4.1.1.24)
C12Y 401/01025	..	Tyrosine decarboxylase (4.1.1.25)
C12Y 401/01028	..	Aromatic-L-amino-acid decarboxylase (4.1.1.28), i.e. tryptophane-decarboxylase
C12Y 401/01029	..	Sulfinioalanine decarboxylase (4.1.1.29)
C12Y 401/0103	..	Pantothenoylcysteine decarboxylase (4.1.1.30)
C12Y 401/01031	..	Phosphoenolpyruvate carboxylase (4.1.1.31)
C12Y 401/01032	..	Phosphoenolpyruvate carboxykinase (GTP) (4.1.1.32)
C12Y 401/01033	..	Diphosphomevalonate decarboxylase (4.1.1.33), i.e. mevalonate-pyrophosphate decarboxylase
C12Y 401/01034	..	Dehydro-L-gulonate decarboxylase (4.1.1.34)
C12Y 401/01035	..	UDP-glucuronate decarboxylase (4.1.1.35), i.e. UDP-D-xylose synthase
C12Y 401/01036	..	Phosphopantothenoylcysteine decarboxylase (4.1.1.36)
C12Y 401/01037	..	Uroporphyrinogen decarboxylase (4.1.1.37)
C12Y 401/01038	..	Phosphoenolpyruvate carboxykinase (diphosphate) (4.1.1.38)
C12Y 401/01039	..	Ribulose-bisphosphate carboxylase (4.1.1.39)
C12Y 401/0104	..	Hydroxypyruvate decarboxylase (4.1.1.40)
C12Y 401/01041	..	Methylmalonyl-CoA decarboxylase (4.1.1.41)
C12Y 401/01042	..	Carnitine decarboxylase (4.1.1.42)
C12Y 401/01043	..	Phenylpyruvate decarboxylase (4.1.1.43)
C12Y 401/01044	..	4-Carboxymuconolactone decarboxylase (4.1.1.44)
C12Y 401/01045	..	Aminocarboxymuconate-semialdehyde decarboxylase (4.1.1.45)
C12Y 401/01046	..	o-Pyrocatechuate decarboxylase (4.1.1.46)
C12Y 401/01047	..	Tartronate-semialdehyde synthase (4.1.1.47)
C12Y 401/01048	..	Indole-3-glycerol-phosphate synthase (4.1.1.48)
C12Y 401/01049	..	Phosphoenolpyruvate carboxykinase (ATP) (4.1.1.49)
C12Y 401/0105	..	Adenosylmethionine decarboxylase (4.1.1.50)
C12Y 401/01051	..	3-Hydroxy-2-methylpyridine-4,5-dicarboxylate 4-decarboxylase (4.1.1.51)

C12Y 401/01052	..	6-Methylsalicylate decarboxylase (4.1.1.52)
C12Y 401/01053	..	Phenylalanine decarboxylase (4.1.1.53)
C12Y 401/01054	..	Dihydroxyfumarate decarboxylase (4.1.1.54)
C12Y 401/01055	..	4,5-Dihydroxyphthalate decarboxylase (4.1.1.55)
C12Y 401/01056	..	3-Oxolaurate decarboxylase (4.1.1.56)
C12Y 401/01057	..	Methionine decarboxylase (4.1.1.57)
C12Y 401/01058	..	Orsellinate decarboxylase (4.1.1.58)
C12Y 401/01059	..	Gallate decarboxylase (4.1.1.59)
C12Y 401/0106	..	Stipitatonate decarboxylase (4.1.1.60)
C12Y 401/01061	..	4-Hydroxybenzoate decarboxylase (4.1.1.61)
C12Y 401/01062	..	Gentisate decarboxylase (4.1.1.62)
C12Y 401/01063	..	Protocatechuate decarboxylase (4.1.1.63)
C12Y 401/01064	..	2,2-Dialkylglycine decarboxylase (pyruvate) (4.1.1.64)
C12Y 401/01065	..	Phosphatidylserine decarboxylase (4.1.1.65)
C12Y 401/01066	..	Uracil-5-carboxylate decarboxylase (4.1.1.66)
C12Y 401/01067	..	UDP-galacturonate decarboxylase (4.1.1.67)
C12Y 401/01068	..	5-Oxopent-3-ene-1,2,5-tricarboxylate decarboxylase (4.1.1.68)
C12Y 401/01069	..	3,4-Dihydroxyphthalate decarboxylase (4.1.1.69)
C12Y 401/0107	..	Glutaconyl-CoA decarboxylase (4.1.1.70)
C12Y 401/01071	..	2-Oxoglutarate decarboxylase (4.1.1.71)
C12Y 401/01072	..	Branched-chain-2-oxoacid decarboxylase (4.1.1.72)
C12Y 401/01073	..	Tartrate decarboxylase (4.1.1.73)
C12Y 401/01074	..	Indolepyruvate decarboxylase (4.1.1.74)
C12Y 401/01075	..	5-Guanidino-2-oxopentanoate decarboxylase (4.1.1.75)
C12Y 401/01076	..	Arylmalonate decarboxylase (4.1.1.76)
C12Y 401/01077	..	4-Oxalocrotonate decarboxylase (4.1.1.77)
C12Y 401/01078	..	Acetylenedicarboxylate decarboxylase (4.1.1.78)
C12Y 401/01079	..	Sulfoxyruvate decarboxylase (4.1.1.79)
C12Y 401/0108	..	4-Hydroxyphenylpyruvate decarboxylase (4.1.1.80)
C12Y 401/01081	..	Threonine-phosphate decarboxylase (4.1.1.81)
C12Y 401/01082	..	Phosphonopyruvate decarboxylase (4.1.1.82)
C12Y 401/01083	..	4-Hydroxyphenylacetate decarboxylase (4.1.1.83)
C12Y 401/01084	..	D-Dopachrome decarboxylase (4.1.1.84)
C12Y 401/01085	..	3-Dehydro-L-gulonate-6-phosphate decarboxylase (4.1.1.85)
C12Y 401/01086	..	Diaminobutyrate decarboxylase (4.1.1.86)
C12Y 401/01087	..	Malonyl-S-ACP decarboxylase (4.1.1.87)
C12Y 401/01088	..	Biotin-independent malonate decarboxylase (4.1.1.88)
C12Y 401/01089	..	Biotin-dependent malonate decarboxylase (4.1.1.89)
C12Y 401/0109	..	Peptidyl-glutamate 4-carboxylase (4.1.1.90)
C12Y 401/01091	..	Salicylate decarboxylase (4.1.1.91)



C12Y 401/01092	..	Indole-3-carboxylate decarboxylase (4.1.1.92)
C12Y 401/01093	..	Pyrrole-2-carboxylate decarboxylase (4.1.1.93)
C12Y 401/02	.	Aldehyde-lyases (4.1.2)
C12Y 401/02002	..	Ketotetrose-phosphate aldolase (4.1.2.2)
C12Y 401/02004	..	Deoxyribose-phosphate aldolase (4.1.2.4)
C12Y 401/02005	..	L-Threonine aldolase (4.1.2.5)
C12Y 401/02008	..	Indole-3-glycerol-phosphate lyase (4.1.2.8)
C12Y 401/02009	..	Phosphoketolase (4.1.2.9)
C12Y 401/0201	..	(R)-Mandelonitrile lyase (4.1.2.10)
C12Y 401/02011	..	Hydroxymandelonitrile lyase (4.1.2.11)
C12Y 401/02012	..	2-Dehydropantoate aldolase (4.1.2.12), i.e. ketopantoaldolase
C12Y 401/02013	..	Fructose-bisphosphate aldolase (4.1.2.13)
C12Y 401/02014	..	2-Dehydro-3-deoxy-phosphogluconate aldolase (4.1.2.14)
C12Y 401/02017	..	L-Fucose-phosphate aldolase (4.1.2.17)
C12Y 401/02018	..	2-Dehydro-3-deoxy-L-pentionate aldolase (4.1.2.18)
C12Y 401/02019	..	Rhamnulose-1-phosphate aldolase (4.1.2.19)
C12Y 401/0202	..	2-Dehydro-3-deoxyglucarate aldolase (4.1.2.20)
C12Y 401/02021	..	2-Dehydro-3-deoxy-6-phosphogalactonate aldolase (4.1.2.21)
C12Y 401/02022	..	Fructose-6-phosphate phosphoketolase (4.1.2.22)
C12Y 401/02023	..	3-Deoxy-D-manno-octulosonate aldolase (4.1.2.23)
C12Y 401/02024	..	Dimethylaniline-N-oxide aldolase (4.1.2.24)
C12Y 401/02025	..	Dihydroneopterin aldolase (4.1.2.25)
C12Y 401/02026	..	Phenylserine aldolase (4.1.2.26)
C12Y 401/02027	..	Sphinganine-1-phosphate aldolase (4.1.2.27)
C12Y 401/02028	..	2-Dehydro-3-deoxy-D-pentionate aldolase (4.1.2.28)
C12Y 401/02029	..	5-Dehydro-2-deoxyphosphogluconate aldolase (4.1.2.29)
C12Y 401/0203	..	17-Alpha-hydroxyprogesterone aldolase (4.1.2.30)
C12Y 401/02032	..	Trimethylamine-oxide aldolase (4.1.2.32)
C12Y 401/02033	..	Fucoesterol-epoxide lyase (4.1.2.33)
C12Y 401/02034	..	4-(2-carboxyphenyl)-2-oxobut-3-enoate aldolase (4.1.2.34)
C12Y 401/02035	..	Propioin synthase (4.1.2.35)
C12Y 401/02036	..	Lactate aldolase (4.1.2.36)
C12Y 401/02037	..	Hydroxynitrilase (4.1.2.37) ( <a href="#">C12Y 401/02046</a> , <a href="#">C12Y 401/02047</a> take precedence )
C12Y 401/02038	..	Benzoin aldolase (4.1.2.38)
C12Y 401/0204	..	Tagatose-bisphosphate aldolase (4.1.2.40)
C12Y 401/02041	..	Vanillin synthase (4.1.2.41)
C12Y 401/02042	..	D-Threonine aldolase (4.1.2.42)
C12Y 401/02043	..	3-Hexulose-6-phosphate synthase (4.1.2.43)
C12Y 401/02044	..	Benzoyl-CoA-dihydrodiol lyase (4.1.2.44)

C12Y 401/02045	..	Trans-o-hydroxybenzylidenepyruvate hydratase-aldolase (4.1.2.45)
C12Y 401/02046	..	Aliphatic (R)-hydroxynitrile lyase (4.1.2.46)
C12Y 401/02047	..	(S)-Hydroxynitrile lyase (4.1.2.47)
C12Y 401/02048	..	Low-specificity L-threonine aldolase (4.1.2.48)
C12Y 401/02049	..	L-Allo-threonine aldolase (4.1.2.49)
C12Y 401/03	.	Oxo-acid-lyases (4.1.3)
C12Y 401/03001	..	Isocitrate lyase (4.1.3.1)
C12Y 401/03003	..	N-Acetylneuraminate lyase (4.1.3.3)
C12Y 401/03004	..	Hydroxymethylglutaryl-CoA lyase (4.1.3.4)
C12Y 401/03006	..	Citrate (pro-3S)-lyase (4.1.3.6)
C12Y 401/03013	..	Oxalomalate lyase (4.1.3.13)
C12Y 401/03014	..	L-Erythro-3-hydroxyaspartate aldolase (4.1.3.14)
C12Y 401/03016	..	4-Hydroxy-2-oxoglutarate aldolase (4.1.3.16)
C12Y 401/03017	..	4-Hydroxy-4-methyl-2-oxoglutarate aldolase (4.1.3.17)
C12Y 401/03022	..	Citramalate lyase (4.1.3.22)
C12Y 401/03024	..	Malyl-CoA lyase (4.1.3.24)
C12Y 401/03025	..	Citramalyl-CoA lyase (4.1.3.25)
C12Y 401/03026	..	3-Hydroxy-3-isohexenylglutaryl-CoA lyase (4.1.3.26)
C12Y 401/03027	..	Anthranilate synthase (4.1.3.27)
C12Y 401/0303	..	Methylisocitrate lyase (4.1.3.30)
C12Y 401/03032	..	2,3-Dimethylmalate lyase (4.1.3.32)
C12Y 401/03034	..	Citryl-CoA lyase (4.1.3.34)
C12Y 401/03035	..	(1-hydroxycyclohexan-1-yl)acetyl-CoA lyase (4.1.3.35)
C12Y 401/03036	..	1,4-Dihydroxy-2-naphthoyl-CoA synthase (4.1.3.36)
C12Y 401/03038	..	Aminodeoxychorismate lyase (4.1.3.38)
C12Y 401/03039	..	4-Hydroxy-2-oxovalerate aldolase (4.1.3.39)
C12Y 401/0304	..	Chorismate lyase (4.1.3.40)
C12Y 401/03041	..	3-Hydroxy-D-aspartate aldolase (4.1.3.41)
C12Y 401/99	.	Other Carbon-Carbon Lyases (1.4.99)
C12Y 401/99001	..	Tryptophanase (4.1.99.1)
C12Y 401/99002	..	Tyrosine phenol-lyase (4.1.99.2)
C12Y 401/99003	..	Deoxyribodipyrimidine photo-lyase (4.1.99.3)
C12Y 401/99005	..	Octadecanal decarbonylase (4.1.99.5)
C12Y 401/99011	..	Benzylsuccinate synthase (4.1.99.11)
C12Y 401/99012	..	3,4-Dihydroxy-2-butanone-4-phosphate synthase (4.1.99.12)
C12Y 401/99013	..	(6-4)DNA photolyase (4.1.99.13)
C12Y 401/99014	..	Spore photoproduct lyase (4.1.99.14)
C12Y 401/99016	..	Geosmin synthase (4.1.99.16)
C12Y 401/99017	..	Phosphomethylpyrimidine synthase (4.1.99.17)

- C12Y 401/99018 . . Cyclic pyranopterin monophosphate synthase (4.1.99.18)
- C12Y 401/99019 . . 2-Iminoacetate synthase (4.1.99.19)

## **C12Y 402/00 Carbon-oxygen lyases (4.2)**

- C12Y 402/01 . Hydro-lyases (4.2.1)
  - C12Y 402/01001 . . Carbonate dehydratase (4.2.1.1), i.e. carbonic anhydrase
  - C12Y 402/01002 . . Fumarate hydratase (4.2.1.2)
  - C12Y 402/01003 . . Aconitate hydratase (4.2.1.3)
  - C12Y 402/01004 . . Citrate dehydratase (4.2.1.4)
  - C12Y 402/01005 . . Arabinonate dehydratase (4.2.1.5)
  - C12Y 402/01006 . . Galactonate dehydratase (4.2.1.6)
  - C12Y 402/01007 . . Altronate dehydratase (4.2.1.7)
  - C12Y 402/01008 . . Mannonate dehydratase (4.2.1.8)
  - C12Y 402/01009 . . Dihydroxy-acid dehydratase (4.2.1.9), i.e. acetohydroxyacid dehydratase
  - C12Y 402/0101 . . 3-Dehydroquinate dehydratase (4.2.1.10)
  - C12Y 402/01011 . . Phosphopyruvate hydratase (4.2.1.11), i.e. enolase
  - C12Y 402/01012 . . Phosphogluconate dehydratase (4.2.1.12)
  - C12Y 402/01017 . . Enoyl-CoA hydratase (4.2.1.17), i.e. crotonase
  - C12Y 402/01018 . . Methylglutaconyl-CoA hydratase (4.2.1.18)
  - C12Y 402/01019 . . Imidazoleglycerol-phosphate dehydratase (4.2.1.19)
  - C12Y 402/0102 . . Tryptophan synthase (4.2.1.20)
  - C12Y 402/01022 . . Cystathionine beta-synthase (4.2.1.22)
  - C12Y 402/01024 . . Porphobilinogen synthase (4.2.1.24)
  - C12Y 402/01025 . . L-Arabinonate dehydratase (4.2.1.25)
  - C12Y 402/01027 . . Acetylenecarboxylate hydratase (4.2.1.27)
  - C12Y 402/01028 . . Propanediol dehydratase (4.2.1.28)
  - C12Y 402/0103 . . Glycerol dehydratase (4.2.1.30)
  - C12Y 402/01031 . . Maleate hydratase (4.2.1.31)
  - C12Y 402/01032 . . L(+)-Tartrate dehydratase (4.2.1.32)
  - C12Y 402/01033 . . 3-Isopropylmalate dehydratase (4.2.1.33)
  - C12Y 402/01034 . . (S)-2-Methylmalate dehydratase (4.2.1.34)
  - C12Y 402/01035 . . (R)-2-Methylmalate dehydratase (4.2.1.35)
  - C12Y 402/01036 . . Homoaconitate hydratase (4.2.1.36)
  - C12Y 402/01039 . . Gluconate dehydratase (4.2.1.39)
  - C12Y 402/0104 . . Glucarate dehydratase (4.2.1.40)
  - C12Y 402/01041 . . 5-Dehydro-4-deoxyglucarate dehydratase (4.2.1.41)
  - C12Y 402/01042 . . Galactarate dehydratase (4.2.1.42)
  - C12Y 402/01043 . . 2-Dehydro-3-deoxy-L-arabinonate dehydratase (4.2.1.43)
  - C12Y 402/01044 . . Myo-inosose-2 dehydratase (4.2.1.44)

C12Y 402/01045	..	CDP-glucose 4,6-dehydratase (4.2.1.45)
C12Y 402/01046	..	dTDP-glucose 4,6-dehydratase (4.2.1.46)
C12Y 402/01047	..	GDP-mannose 4,6-dehydratase (4.2.1.47), i.e. GMD
C12Y 402/01048	..	D-Glutamate cyclase (4.2.1.48)
C12Y 402/01049	..	Urocanate hydratase (4.2.1.49)
C12Y 402/0105	..	Pyrazolylalanine synthase (4.2.1.50)
C12Y 402/01051	..	Prephenate dehydratase (4.2.1.51)
C12Y 402/01052	..	Dihydrodipicolinate synthase (4.2.1.52)
C12Y 402/01053	..	Oleate hydratase (4.2.1.53)
C12Y 402/01054	..	Lactoyl-CoA dehydratase (4.2.1.54)
C12Y 402/01055	..	3-Hydroxybutyryl-CoA dehydratase (4.2.1.55)
C12Y 402/01056	..	Itaconyl-CoA hydratase (4.2.1.56)
C12Y 402/01057	..	Isohexenylglutaconyl-CoA hydratase (4.2.1.57)
C12Y 402/01058	..	Crotonoyl-[acyl-carrier-protein hydratase (4.2.1.58)
C12Y 402/01059	..	3-Hydroxyoctanoyl-[acyl-carrier-protein dehydratase (4.2.1.59)
C12Y 402/0106	..	3-Hydroxydecanoyl-[acyl-carrier-protein dehydratase (4.2.1.60)
C12Y 402/01061	..	3-Hydroxypalmitoyl-[acyl-carrier-protein dehydratase (4.2.1.61)
C12Y 402/01062	..	5-Alpha-hydroxysteroid dehydratase (4.2.1.62)
C12Y 402/01065	..	3-Cyanoalanine hydratase (4.2.1.65)
C12Y 402/01066	..	Cyanide hydratase (4.2.1.66)
C12Y 402/01067	..	D-Fuconate dehydratase (4.2.1.67)
C12Y 402/01068	..	L-Fuconate dehydratase (4.2.1.68)
C12Y 402/01069	..	Cyanamide hydratase (4.2.1.69)
C12Y 402/0107	..	Pseudouridylate synthase (4.2.1.70)
C12Y 402/01073	..	Protoaphin-aglucone dehydratase (cyclizing) (4.2.1.73)
C12Y 402/01074	..	Long-chain-enoyl-CoA hydratase (4.2.1.74)
C12Y 402/01075	..	Uroporphyrinogen-III synthase (4.2.1.75)
C12Y 402/01076	..	UDP-glucose 4,6-dehydratase (4.2.1.76)
C12Y 402/01077	..	Trans-L-3-hydroxyproline dehydratase (4.2.1.77)
C12Y 402/01078	..	(S)-norcoclaurine synthase (4.2.1.78)
C12Y 402/01079	..	2-Methylcitrate dehydratase (4.2.1.79)
C12Y 402/0108	..	2-Oxopent-4-enoate hydratase (4.2.1.80)
C12Y 402/01081	..	D(-)-tartrate dehydratase (4.2.1.81)
C12Y 402/01082	..	Xylonate dehydratase (4.2.1.82)
C12Y 402/01083	..	4-Oxalmesaconate hydratase (4.2.1.83)
C12Y 402/01084	..	Nitrile hydratase (4.2.1.84)
C12Y 402/01085	..	Dimethylmaleate hydratase (4.2.1.85)
C12Y 402/01087	..	Octopamine dehydratase (4.2.1.87)
C12Y 402/01088	..	Synephrine dehydratase (4.2.1.88)
C12Y 402/01089	..	Carnitine dehydratase (4.2.1.89)

C12Y 402/0109	..	L-Rhamnonate dehydratase (4.2.1.90)
C12Y 402/01091	..	Arogenate dehydratase (4.2.1.91)
C12Y 402/01092	..	Hydroperoxide dehydratase (4.2.1.92)
C12Y 402/01093	..	ATP-dependent NAD(P)H-hydrate dehydratase (4.2.1.93)
C12Y 402/01094	..	Scytalone dehydratase (4.2.1.94)
C12Y 402/01095	..	Kievitone hydratase (4.2.1.95)
C12Y 402/01096	..	4a-Hydroxytetrahydrobiopterin dehydratase (4.2.1.96)
C12Y 402/01097	..	Phaseollidin hydratase (4.2.1.97)
C12Y 402/01098	..	16-Alpha-hydroxyprogesterone dehydratase (4.2.1.98)
C12Y 402/01099	..	2-Methylisocitrate dehydratase (4.2.1.99)
C12Y 402/011	..	Cyclohexa-1,5-dienecarbonyl-CoA hydratase (4.2.1.100)
C12Y 402/01101	..	Trans-feruloyl-CoA hydratase (4.2.1.101)
C12Y 402/01103	..	Cyclohexyl-isocyanide hydratase (4.2.1.103)
C12Y 402/01104	..	Cyanase (4.2.1.104)
C12Y 402/01105	..	2-Hydroxyisoflavanone dehydratase (4.2.1.105)
C12Y 402/01106	..	Bile-acid 7-alpha-dehydratase (4.2.1.106)
C12Y 402/01107	..	3-Alpha,7-alpha,12-alpha-trihydroxy-5-beta-cholest-24-enoyl-CoA hydratase (4.2.1.107)
C12Y 402/01108	..	Ectoine synthase (4.2.1.108)
C12Y 402/01109	..	Methylthioribulose 1-phosphate dehydratase (4.2.1.109)
C12Y 402/0111	..	Aldos-2-ulose dehydratase (4.2.1.110)
C12Y 402/01111	..	1,5-Anhydro-D-fructose dehydratase (4.2.1.111)
C12Y 402/01112	..	Acetylene hydratase (4.2.1.112)
C12Y 402/01113	..	o-Succinylbenzoate synthase (4.2.1.113)
C12Y 402/01114	..	Methanogen homoaconitase (4.2.1.114)
C12Y 402/01115	..	UDP-N-acetylglucosamine 4,6-dehydratase (inverting) (4.2.1.115)
C12Y 402/01116	..	3-Hydroxypropionyl-CoA dehydratase (4.2.1.116)
C12Y 402/01117	..	2-Methylcitrate dehydratase ( <a href="#">2-methyl-trans-aconitate forming</a> )(4.2.1.117)
C12Y 402/01118	..	3-Dehydroshikimate dehydratase (4.2.1.118)
C12Y 402/01119	..	Enoyl-CoA hydratase 2 (4.2.1.119)
C12Y 402/0112	..	4-Hydroxybutanoyl-CoA dehydratase (4.2.1.120)
C12Y 402/01121	..	Colneleate synthase (4.2.1.121)
C12Y 402/01122	..	Tryptophan synthase (indole-salvaging) (4.2.1.122)
C12Y 402/01123	..	Tetrahymanol synthase (4.2.1.123)
C12Y 402/01124	..	Arabidiol synthase (4.2.1.124)
C12Y 402/01125	..	Dammarenediol II synthase (4.2.1.125)
C12Y 402/01126	..	N-Acetylmuramic acid 6-phosphate etherase (4.2.1.126)
C12Y 402/01127	..	Linalool dehydratase (4.2.1.127)
C12Y 402/01128	..	Lupan-3-beta,20-diol synthase (4.2.1.128)
C12Y 402/01129	..	Squalene--hopanol cyclase (4.2.1.129)

C12Y 402/0113	..	D-Lactate dehydratase (4.2.1.130)
C12Y 402/01131	..	Carotenoid 1,2-hydratase (4.2.1.131)
C12Y 402/02	.	acting on polysaccharides (4.2.2)
C12Y 402/02001	..	Hyaluronate lyase (4.2.2.1)
C12Y 402/02002	..	Pectate lyase (4.2.2.2)
C12Y 402/02003	..	Poly(beta-D-mannuronate) lyase (4.2.2.3)
C12Y 402/02004	..	Chondroitin ABC lyase (4.2.2.4), i.e. chondroitinase ( <a href="#">C12Y 402/0202</a> or <a href="#">C12Y 402/02021</a> takes precedence )
C12Y 402/02005	..	Chondroitin AC lyase (4.2.2.5)
C12Y 402/02006	..	Oligogalacturonide lyase (4.2.2.6)
C12Y 402/02007	..	Heparin lyase (4.2.2.7), i.e. heparinase I
C12Y 402/02008	..	Heparin-sulfate lyase (4.2.2.8)
C12Y 402/02009	..	Pectate disaccharide-lyase (4.2.2.9)
C12Y 402/0201	..	Pectin lyase (4.2.2.10)
C12Y 402/02011	..	Poly(alpha-L-guluronate) lyase (4.2.2.11), i.e. alginase II
C12Y 402/02012	..	Xanthan lyase (4.2.2.12)
C12Y 402/02013	..	Exo-(1->4)-alpha-D-glucan lyase (4.2.2.13)
C12Y 402/02014	..	Glucuronan lyase (4.2.2.14)
C12Y 402/02015	..	Anhydrosialidase (4.2.2.15)
C12Y 402/02016	..	Levan fructotransferase (DFA-IV-forming) (4.2.2.16)
C12Y 402/02017	..	Inulin fructotransferase (DFA-I-forming) (4.2.2.17)
C12Y 402/02018	..	Inulin fructotransferase (DFA-III-forming) (4.2.2.18)
C12Y 402/02019	..	Chondroitin B lyase (4.2.2.19)
C12Y 402/0202	..	Chondroitin-sulfate-ABC endolyase (4.2.2.20)
C12Y 402/02021	..	Chondroitin-sulfate-ABC exolyase (4.2.2.21)
C12Y 402/02022	..	Pectate trisaccharide-lyase (4.2.2.22)
C12Y 402/02023	..	Rhamnogalacturonan endolyase (4.2.2.23)
C12Y 402/02024	..	Rhamnogalacturonan exolyase (4.2.2.24)
C12Y 402/02025	..	Gellan lyase (4.2.2.25)
C12Y 402/03	.	acting on phosphates (4.2.3)
C12Y 402/03001	..	Threonine synthase (4.2.3.1)
C12Y 402/03002	..	Ethanolamine-phosphate phospho-lyase (4.2.3.2)
C12Y 402/03003	..	Methylglyoxal synthase (4.2.3.3)
C12Y 402/03004	..	3-Dehydroquinate synthase (4.2.3.4)
C12Y 402/03005	..	Chorismate synthase (4.2.3.5)
C12Y 402/03006	..	Trichodiene synthase (4.2.3.6)
C12Y 402/03007	..	Pentalenene synthase (4.2.3.7)
C12Y 402/03008	..	Casbene synthase (4.2.3.8)
C12Y 402/03009	..	Aristolochene synthase (4.2.3.9)



C12Y 402/0301	..	(-)-Endo-fenchol synthase (4.2.3.10)
C12Y 402/03011	..	Sabinene-hydrate synthase (4.2.3.11)
C12Y 402/03012	..	6-Pyruvoyltetrahydropterin synthase (4.2.3.12)
C12Y 402/03013	..	(+)-Delta-cadinene synthase (4.2.3.13)
C12Y 402/03014	..	Pinene synthase (4.2.3.14)
C12Y 402/03015	..	Myrcene synthase (4.2.3.15)
C12Y 402/03016	..	(4S)-Limonene synthase (4.2.3.16)
C12Y 402/03017	..	Taxadiene synthase (4.2.3.17)
C12Y 402/03018	..	Abietadiene synthase (4.2.3.18)
C12Y 402/03019	..	Ent-kaurene synthase (4.2.3.19)
C12Y 402/0302	..	(R)-Limonene synthase (4.2.3.20)
C12Y 402/03021	..	Vetispiradiene synthase (4.2.3.21)
C12Y 402/03022	..	Germacradienol synthase (4.2.3.22)
C12Y 402/03023	..	Germacrene-A synthase (4.2.3.23)
C12Y 402/03024	..	Amorpha-4,11-diene synthase (4.2.3.24)
C12Y 402/03025	..	S-Linalool synthase (4.2.3.25)
C12Y 402/03026	..	R-Linalool synthase (4.2.3.26)
C12Y 402/03027	..	Isoprene synthase (4.2.3.27)
C12Y 402/03028	..	Ent-cassa-12,15-diene synthase (4.2.3.28)
C12Y 402/03029	..	Ent-sandaracopimaradiene synthase (4.2.3.29)
C12Y 402/0303	..	Ent-pimara-8(14),15-diene synthase (4.2.3.30)
C12Y 402/03031	..	Ent-pimara-9(11),15-diene synthase (4.2.3.31)
C12Y 402/03032	..	Levopimaradiene synthase (4.2.3.32)
C12Y 402/03033	..	Stemar-13-ene synthase (4.2.3.33)
C12Y 402/03034	..	Stemod-13(17)-ene synthase (4.2.3.34)
C12Y 402/03035	..	Syn-pimara-7,15-diene synthase (4.2.3.35)
C12Y 402/03036	..	Terpentetriene synthase (4.2.3.36)
C12Y 402/03037	..	Epi-isozizaene synthase (4.2.3.37)
C12Y 402/03038	..	Alpha-bisabolene synthase (4.2.3.38)
C12Y 402/03039	..	Epi-cedrol synthase (4.2.3.39)
C12Y 402/0304	..	(Z)-Gamma-bisabolene synthase (4.2.3.40)
C12Y 402/03041	..	Elisabethatriene synthase (4.2.3.41)
C12Y 402/03042	..	Aphidicolan-16-beta-ol synthase (4.2.3.42)
C12Y 402/03043	..	Fusicocca-2,10(14)-diene synthase (4.2.3.43)
C12Y 402/03044	..	Isopimara-7,15-diene synthase (4.2.3.44)
C12Y 402/03045	..	Phyllocladan-16-alpha-ol synthase (4.2.3.45)
C12Y 402/03046	..	Alpha-farnesene synthase (4.2.3.46)
C12Y 402/03047	..	Beta-farnesene synthase (4.2.3.47)
C12Y 402/03048	..	(3S,6E)-Nerolidol synthase (4.2.3.48)
C12Y 402/03049	..	(3R,6E)-Nerolidol synthase (4.2.3.49)

C12Y 402/0305	..	(+)-Alpha-santalene synthase ((2Z,6Z)-farnesyl diphosphate cyclizing)(4.2.3.50)
C12Y 402/03051	..	Beta-phellandrene synthase (neryl-diphosphate-cyclizing) (4.2.3.51)
C12Y 402/03052	..	(4S)-Beta-phellandrene synthase (geranyl-diphosphate-cyclizing) (4.2.3.52)
C12Y 402/03053	..	(+)-Endo-beta-bergamotene synthase ((2Z,6Z)-farnesyl diphosphate cyclizing)(4.2.3.53)
C12Y 402/03054	..	(-)-Endo-alpha-bergamotene synthase ((2Z,6Z)-farnesyl diphosphate cyclizing)(4.2.3.54)
C12Y 402/03055	..	(S)-Beta-bisabolene synthase (4.2.3.55)
C12Y 402/03056	..	Gamma-humulene synthase (4.2.3.56)
C12Y 402/03057	..	Beta-caryophyllene synthase (4.2.3.57)
C12Y 402/03058	..	Longifolene synthase (4.2.3.58)
C12Y 402/03059	..	(E)-Gamma-bisabolene synthase (4.2.3.59)
C12Y 402/0306	..	Germacrene C synthase (4.2.3.60)
C12Y 402/03061	..	5-Epiaristolochene synthase (4.2.3.61)
C12Y 402/03062	..	(-)-Gamma-cadinene synthase ((2Z,6E)-farnesyl diphosphate cyclizing)(4.2.3.62)
C12Y 402/03063	..	(+)-Cubenene synthase (4.2.3.63)
C12Y 402/03064	..	(+)-Epicubenol synthase (4.2.3.64)
C12Y 402/03065	..	Zingiberene synthase (4.2.3.65)
C12Y 402/03066	..	Beta-selinene cyclase (4.2.3.66)
C12Y 402/03067	..	Cis-muroladiene synthase (4.2.3.67)
C12Y 402/03068	..	Beta-eudesmol synthase (4.2.3.68)
C12Y 402/03069	..	(+)-Alpha-barbatene synthase (4.2.3.69)
C12Y 402/0307	..	Patchoulol synthase (4.2.3.70)
C12Y 402/03071	..	(E,E)-Germacrene B synthase (4.2.3.71)
C12Y 402/03072	..	Alpha-gurjunene synthase (4.2.3.72)
C12Y 402/03073	..	Valencene synthase (4.2.3.73)
C12Y 402/03074	..	Presilphiperfolanol synthase (4.2.3.74)
C12Y 402/03075	..	(-)-Germacrene D synthase (4.2.3.75)
C12Y 402/03076	..	(+)-Delta-selinene synthase (4.2.3.76)
C12Y 402/03077	..	(+)-Germacrene D synthase (4.2.3.77)
C12Y 402/03078	..	Beta-chamigrene synthase (4.2.3.78)
C12Y 402/03079	..	Thujopsene synthase (4.2.3.79)
C12Y 402/0308	..	Alpha-longipinene synthase (4.2.3.80)
C12Y 402/03081	..	Exo-alpha-bergamotene synthase (4.2.3.81)
C12Y 402/03082	..	Alpha-santalene synthase (4.2.3.82)
C12Y 402/03083	..	Beta-santalene synthase (4.2.3.83)
C12Y 402/03084	..	10-Epi-gamma-eudesmol synthase (4.2.3.84)
C12Y 402/03085	..	Alpha-eudesmol synthase (4.2.3.85)
C12Y 402/03086	..	7-Epi-alpha-selinene synthase (4.2.3.86)
C12Y 402/03087	..	Alpha-guaiene synthase (4.2.3.87)

C12Y 402/03088	..	Viridiflorene synthase (4.2.3.88)
C12Y 402/03089	..	(+)-Beta-caryophyllene synthase (4.2.3.89)
C12Y 402/0309	..	5-Epi-alpha-selinene synthase (4.2.3.90)
C12Y 402/03091	..	Cubebol synthase (4.2.3.91)
C12Y 402/03092	..	(+)-Gamma-cadinene synthase (4.2.3.92)
C12Y 402/03093	..	Delta-guaiene synthase (4.2.3.93)
C12Y 402/99	.	Other carbon-oxygen lyases (4.2.99)
C12Y 402/99006	..	Chondroitin sulfate lyase (4.2.99.6) ( <a href="#">C12Y 402/02005</a> , <a href="#">C12Y 402/0202</a> , <a href="#">C12Y 402/02021</a> take precedence )
C12Y 402/99012	..	Carboxymethyloxysuccinate lyase (4.2.99.12)
C12Y 402/99018	..	DNA- (apurinic or apyrimidinic site) lyase (4.2.99.18)
C12Y 402/9902	..	2-Succinyl-6-hydroxy-2,4-cyclohexadiene-1-carboxylate synthase (4.2.99.20)
C12Y 402/99021	..	Isochorismate lyase (4.2.99.21)

## **C12Y 403/00      Carbon-nitrogen lyases (4.3)**

C12Y 403/01	.	Ammonia-lyases (4.3.1)
C12Y 403/01001	..	Aspartate ammonia-lyase (4.3.1.1), i.e. aspartase
C12Y 403/01002	..	Methylaspartate ammonia-lyase (4.3.1.2)
C12Y 403/01003	..	Histidine ammonia-lyase (4.3.1.3)
C12Y 403/01004	..	Formimidoyltetrahydrofolate cyclodeaminase (4.3.1.4)
C12Y 403/01005	..	Phenylalanine ammonia-lyase ( <a href="#">4.3.1.5</a> ) ( <a href="#">C12Y 403/01023</a> - <a href="#">C12Y 403/01025</a> takes precedence )
C12Y 403/01006	..	Beta-alanyl-CoA ammonia-lyase (4.3.1.6)
C12Y 403/01007	..	Ethanolamine ammonia-lyase (4.3.1.7)
C12Y 403/01009	..	Glucosaminase ammonia-lyase (4.3.1.9)
C12Y 403/0101	..	Serine-sulfate ammonia-lyase (4.3.1.10)
C12Y 403/01012	..	Ornithine cyclodeaminase (4.3.1.12)
C12Y 403/01013	..	Carbamoyl-serine ammonia-lyase (4.3.1.13)
C12Y 403/01014	..	3-Aminobutyryl-CoA ammonia-lyase (4.3.1.14)
C12Y 403/01015	..	Diaminopropionate ammonia-lyase (4.3.1.15)
C12Y 403/01016	..	Threo-3-hydroxy-L-aspartate ammonia-lyase (4.3.1.16)
C12Y 403/01017	..	L-Serine ammonia-lyase (4.3.1.17)
C12Y 403/01018	..	D-Serine ammonia-lyase (4.3.1.18)
C12Y 403/01019	..	Threonine ammonia-lyase (4.3.1.19)
C12Y 403/0102	..	Erythro-3-hydroxy-L-aspartate ammonia-lyase (4.3.1.20)
C12Y 403/01022	..	3,4-Dihydroxyphenylalanine reductive deaminase (4.3.1.22)
C12Y 403/01023	..	Tyrosine ammonia-lyase (4.3.1.23)
C12Y 403/01024	..	Phenylalanine ammonia-lyase (4.3.1.24)
C12Y 403/01025	..	Phenylalanine-tyrosine ammonia-lyase (4.3.1.25)

C12Y 403/01026	.. Chromopyrrolate synthase (4.3.1.26)
C12Y 403/01027	.. Threo-3-hydroxy-D-aspartate ammonia-lyase (4.3.1.27)
C12Y 403/02	. Amidine-lyases (4.3.2)
C12Y 403/02001	.. Argininosuccinate lyase (4.3.2.1)
C12Y 403/02002	.. Adenylosuccinate lyase (4.3.2.2)
C12Y 403/02003	.. Ureidoglycolate lyase (4.3.2.3)
C12Y 403/02004	.. Purine imidazole-ring cyclase (4.3.2.4)
C12Y 403/02005	.. Peptidylamidoglycolate lyase (4.3.2.5)
C12Y 403/03	. Amine-lyases (4.3.3)
C12Y 403/03001	.. 3-Ketovalidoxylamine C-N-lyase (4.3.3.1)
C12Y 403/03002	.. Strictosidine synthase (4.3.3.2)
C12Y 403/03003	.. Deacetyloisopicoside synthase (4.3.3.3)
C12Y 403/03004	.. Deacetylpecoside synthase (4.3.3.4)
C12Y 403/03005	.. 4'-Demethylrebeccamycin synthase (4.3.3.5)
C12Y 403/03006	.. Pyridoxal 5'-phosphate synthase ( <a href="#">glutamine hydrolyzing</a> )(4.3.3.6)
C12Y 403/99	. Other carbon-nitrogen lyases (4.3.99)
C12Y 403/99002	.. Carboxybiotin decarboxylase (4.3.99.2)
<b>C12Y 404/00</b>	<b>Carbon-sulfur lyases (4.4)</b>
C12Y 404/01	. Carbon-sulfur lyases (4.4.1)
C12Y 404/01001	.. Cystathionine gamma-lyase (4.4.1.1)
C12Y 404/01002	.. Homocysteine desulfhydrase (4.4.1.2)
C12Y 404/01003	.. Dimethylpropiothetin dethiomethylase (4.4.1.3)
C12Y 404/01004	.. Alliin lyase (4.4.1.4)
C12Y 404/01005	.. Lactoylglutathione lyase (4.4.1.5)
C12Y 404/01006	.. S-Alkylcysteine lyase (4.4.1.6)
C12Y 404/01008	.. Cystathionine beta-lyase (4.4.1.8)
C12Y 404/01009	.. L-3-Cyanoalanine synthase (4.4.1.9)
C12Y 404/0101	.. Cysteine lyase (4.4.1.10)
C12Y 404/01011	.. Methionine gamma-lyase (4.4.1.11)
C12Y 404/01013	.. Cysteine-S-conjugate beta-lyase (4.4.1.13)
C12Y 404/01014	.. 1-Aminocyclopropane-1-carboxylate synthase (4.4.1.14)
C12Y 404/01015	.. D-Cysteine desulfhydrase (4.4.1.15)
C12Y 404/01016	.. Selenocysteine lyase (4.4.1.16)
C12Y 404/01017	.. Holocytochrome-c synthase (4.4.1.17)
C12Y 404/01019	.. Phosphosulfolactate synthase (4.4.1.19)
C12Y 404/0102	.. Leukotriene-C4 synthase (4.4.1.20)

- C12Y 404/01021 .. S-Ribosylhomocysteine lyase (4.4.1.21)
- C12Y 404/01022 .. S-(Hydroxymethyl)glutathione synthase (4.4.1.22)
- C12Y 404/01023 .. 2-Hydroxypropyl-CoM lyase (4.4.1.23)
- C12Y 404/01024 .. (2R)-Sulfolactate sulfo-lyase (4.4.1.24)
- C12Y 404/01025 .. L-Cysteate sulfo-lyase (4.4.1.25)

#### **C12Y 405/00 Carbon-halide lyases (4.5)**

- C12Y 405/01 . Carbon-halide lyases (4.5.1)
- C12Y 405/01001 .. DDT-dehydrochlorinase (4.5.1.1)
- C12Y 405/01002 .. 3-Chloro-D-alanine dehydrochlorinase (4.5.1.2)
- C12Y 405/01003 .. Dichloromethane dehalogenase (4.5.1.3)
- C12Y 405/01004 .. L-2-Amino-4-chloropent-4-enoate dehydrochlorinase (4.5.1.4)
- C12Y 405/01005 .. S-Carboxymethylcysteine synthase (4.5.1.5)

#### **C12Y 406/00 Phosphorus-oxygen lyases (4.6)**

- C12Y 406/01 . Phosphorus-oxygen lyases (4.6.1)
- C12Y 406/01001 .. Adenylate cyclase (4.6.1.1)
- C12Y 406/01002 .. Guanylate cyclase (4.6.1.2)
- C12Y 406/01006 .. Cytidylate cyclase (4.6.1.6)
- C12Y 406/01012 .. 2-C-Methyl-D-erythritol 2,4-cyclodiphosphate synthase (4.6.1.12)
- C12Y 406/01013 .. Phosphatidylinositol diacylglycerol-lyase (4.6.1.13)
- C12Y 406/01014 .. Glycosylphosphatidylinositol diacylglycerol-lyase (4.6.1.14)
- C12Y 406/01015 .. FAD-AMP lyase (cyclizing) (4.6.1.15)

#### **C12Y 499/00 Other lyases (4.99)**

- C12Y 499/01 . Other lyases (4.99.1)
- C12Y 499/01001 .. Ferrochelataase (4.99.1.1)
- C12Y 499/01002 .. Alkylmercury lyase (4.99.1.2)
- C12Y 499/01003 .. Sirohydrochlorin cobaltochelataase (4.99.1.3)
- C12Y 499/01004 .. Sirohydrochlorin ferrochelataase (4.99.1.4)
- C12Y 499/01005 .. Aliphatic aldoxime dehydrataase (4.99.1.5)
- C12Y 499/01006 .. Indoleacetaldoxime dehydrataase (4.99.1.6)
- C12Y 499/01007 .. Phenylacetaldoxime dehydrataase (4.99.1.7)
- C12Y 499/01008 .. Heme ligase (4.99.1.8)

#### **C12Y 501/00 Racemases and epimerases (5.1)**

- C12Y 501/01 . acting on amino acids and derivatives (5.1.1)

C12Y 501/01001	.. Alanine racemase (5.1.1.1)
C12Y 501/01002	.. Methionine racemase (5.1.1.2)
C12Y 501/01003	.. Glutamate racemase (5.1.1.3)
C12Y 501/01004	.. Proline racemase (5.1.1.4)
C12Y 501/01005	.. Lysine racemase (5.1.1.5)
C12Y 501/01006	.. Threonine racemase (5.1.1.6)
C12Y 501/01007	.. Diaminopimelate epimerase (5.1.1.7)
C12Y 501/01008	.. 4-Hydroxyproline epimerase (5.1.1.8)
C12Y 501/01009	.. Arginine racemase (5.1.1.9)
C12Y 501/0101	.. Amino-acid racemase (5.1.1.10)
C12Y 501/01011	.. Phenylalanine racemase (ATP-hydrolyzing) (5.1.1.11)
C12Y 501/01012	.. Ornithine racemase (5.1.1.12)
C12Y 501/01013	.. Aspartate racemase (5.1.1.13)
C12Y 501/01014	.. Nocardicin-A epimerase (5.1.1.14)
C12Y 501/01015	.. 2-Aminohexano-6-lactam racemase (5.1.1.15)
C12Y 501/01016	.. Protein-serine epimerase (5.1.1.16)
C12Y 501/01017	.. Isopenicillin-N epimerase (5.1.1.17)
C12Y 501/01018	.. Serine racemase (5.1.1.18)
C12Y 501/02	. acting on hydroxy acids and derivatives (5.1.2)
C12Y 501/02001	.. Lactate racemase (5.1.2.1)
C12Y 501/02002	.. Mandelate racemase (5.1.2.2)
C12Y 501/02003	.. 3-Hydroxybutyryl-CoA epimerase (5.1.2.3)
C12Y 501/02004	.. Acetoin racemase (5.1.2.4)
C12Y 501/02005	.. Tartrate epimerase (5.1.2.5)
C12Y 501/02006	.. Isocitrate epimerase (5.1.2.6)
C12Y 501/03	. acting on carbohydrates and derivatives (5.1.3)
C12Y 501/03001	.. Ribulose-phosphate 3-epimerase (5.1.3.1)
C12Y 501/03002	.. UDP-glucose 4-epimerase (5.1.3.2), i.e. UDP-galactose 4-epimerase
C12Y 501/03003	.. Aldose 1-epimerase (5.1.3.3)
C12Y 501/03004	.. L-Ribulose-5-phosphate 4-epimerase (5.1.3.4)
C12Y 501/03005	.. UDP-arabinose 4-epimerase (5.1.3.5)
C12Y 501/03006	.. UDP-glucuronate 4-epimerase (5.1.3.6)
C12Y 501/03007	.. UDP-N-acetylglucosamine 4-epimerase (5.1.3.7)
C12Y 501/03008	.. N-Acylglucosamine 2-epimerase (5.1.3.8)
C12Y 501/03009	.. N-Acylglucosamine-6-phosphate 2-epimerase (5.1.3.9)
C12Y 501/0301	.. CDP-paratose 2-epimerase (5.1.3.10)
C12Y 501/03011	.. Cellobiose epimerase (5.1.3.11)
C12Y 501/03012	.. UDP-glucuronate 5'-epimerase (5.1.3.12)
C12Y 501/03013	.. dTDP-4-dehydrorhamnose 3,5-epimerase (5.1.3.13)



C12Y 501/03014	..	UDP-N-acetylglucosamine 2-epimerase (5.1.3.14)
C12Y 501/03015	..	Glucose-6-phosphate 1-epimerase (5.1.3.15)
C12Y 501/03016	..	UDP-glucosamine 4-epimerase (5.1.3.16)
C12Y 501/03017	..	Heparosan-N-sulfate-glucuronate 5-epimerase (5.1.3.17)
C12Y 501/03018	..	GDP-mannose 3,5-epimerase (5.1.3.18)
C12Y 501/03019	..	Chondroitin-glucuronate 5-epimerase (5.1.3.19)
C12Y 501/0302	..	ADP-glyceromanno-heptose 6-epimerase (5.1.3.20)
C12Y 501/03021	..	Maltose epimerase (5.1.3.21)
C12Y 501/03022	..	L-Ribulose-5-phosphate 3-epimerase (5.1.3.22)
C12Y 501/03023	..	UDP-2,3-diacetamido-2,3-dideoxyglucuronic acid 2-epimerase (5.1.3.23)
C12Y 501/03024	..	N-Acetylneuraminate epimerase (5.1.3.24)

C12Y 501/99	.	acting on other compounds (5.1.99)
C12Y 501/99001	..	Methylmalonyl-CoA epimerase (5.1.99.1)
C12Y 501/99002	..	16-Hydroxysteroid epimerase (5.1.99.2)
C12Y 501/99003	..	Allantoin racemase (5.1.99.3)
C12Y 501/99004	..	Alpha-methylacyl-CoA racemase (5.1.99.4)
C12Y 501/99005	..	Hydantoin racemase (5.1.99.5)

## **C12Y 502/00      Cis-trans-isomerases (5.2)**

C12Y 502/01	.	Cis-trans-Isomerases (5.2.1)
C12Y 502/01001	..	Maleate isomerase (5.2.1.1)
C12Y 502/01002	..	Maleylacetoacetate isomerase (5.2.1.2)
C12Y 502/01003	..	Retinal isomerase (5.2.1.3) ( <a href="#">C12Y 101/013</a> , <a href="#">C12Y 101/01315</a> , <a href="#">C12Y 203/01135</a> , <a href="#">C12Y 301/01064</a> take precedence )
C12Y 502/01004	..	Maleylpyruvate isomerase (5.2.1.4)
C12Y 502/01005	..	Linoleate isomerase (5.2.1.5)
C12Y 502/01006	..	Furylfuramide isomerase (5.2.1.6)
C12Y 502/01008	..	Peptidylprolyl isomerase (5.2.1.8), i.e. cyclophilin
C12Y 502/01009	..	Farnesol 2-isomerase (5.2.1.9)
C12Y 502/0101	..	2-Chloro-4-carboxymethylenebut-2-en-1,4-olide isomerase (5.2.1.10)
C12Y 502/01012	..	Zeta-carotene isomerase (5.2.1.12)
C12Y 502/01013	..	Prolycopene isomerase (5.2.1.13)

## **C12Y 503/00      Intramolecular oxidoreductases (5.3)**

C12Y 503/01	.	interconverting aldoses and ketoses (5.3.1)
C12Y 503/01001	..	Triose-phosphate isomerase (5.3.1.1)
C12Y 503/01003	..	Arabinose isomerase (5.3.1.3)
C12Y 503/01004	..	L-Arabinose isomerase (5.3.1.4)

C12Y 503/01005	..	Xylose isomerase (5.3.1.5)
C12Y 503/01006	..	Ribose-5-phosphate isomerase (5.3.1.6)
C12Y 503/01007	..	Mannose isomerase (5.3.1.7)
C12Y 503/01008	..	Mannose-6-phosphate isomerase (5.3.1.8)
C12Y 503/01009	..	Glucose-6-phosphate isomerase (5.3.1.9)
C12Y 503/01012	..	Glucuronate isomerase (5.3.1.12)
C12Y 503/01013	..	Arabinose-5-phosphate isomerase (5.3.1.13)
C12Y 503/01014	..	L-Rhamnose isomerase (5.3.1.14)
C12Y 503/01015	..	D-Lyxose ketol-isomerase (5.3.1.15)
C12Y 503/01016	..	1-(5-Phosphoribosyl)-5- ((5-phosphoribosylamino)methylideneamino)imidazole-4-carboxamid (5.3.1.16)
C12Y 503/01017	..	4-Deoxy-L-threo-5-hexosulose-uronate ketol-isomerase (5.3.1.17)
C12Y 503/01018	..	Glucose isomerase (5.3.1.18)
C12Y 503/0102	..	Ribose isomerase (5.3.1.20)
C12Y 503/01021	..	Corticosteroid side-chain-isomerase (5.3.1.21)
C12Y 503/01022	..	Hydroxypyruvate isomerase (5.3.1.22)
C12Y 503/01023	..	S-methyl-5-thioribose-1-phosphate isomerase (5.3.1.23), i.e. 5-methylthioribose-1-phosphate isomerase
C12Y 503/01024	..	Phosphoribosylanthranilate isomerase (5.3.1.24)
C12Y 503/01025	..	L-Fucose isomerase (5.3.1.25)
C12Y 503/01026	..	Galactose-6-phosphate isomerase (5.3.1.26)
C12Y 503/01027	..	6-Phospho-3-hexuloisomerase (5.3.1.27)
C12Y 503/01028	..	D-Sedoheptulose 7-phosphate isomerase (5.3.1.28)
C12Y 503/02	.	interconverting keto- and enol-groups (5.3.2)
C12Y 503/02001	..	Phenylpyruvate tautomerase (5.3.2.1)
C12Y 503/02002	..	Oxaloacetate tautomerase (5.3.2.2)
C12Y 503/02003	..	TDP-4-oxo-6-deoxy-alpha-D-glucose-3,4-oxoisomerase (dTDP-3-dehydro-6-deoxy-alpha-D-galactopyranose-forming) (5.3.2.3)
C12Y 503/02004	..	TDP-4-oxo-6-deoxy-alpha-D-glucose-3,4-oxoisomerase (dTDP-3-dehydro-6-deoxy-alpha-D-glucopyranose-forming) (5.3.2.4)
C12Y 503/03	.	transposing C=C bonds (5.3.3)
C12Y 503/03001	..	Steroid DELTA-isomerase (5.3.3.1)
C12Y 503/03002	..	Isopentenyl-diphosphate DELTA-isomerase (5.3.3.2)
C12Y 503/03003	..	Vinylacetyl-CoA DELTA-isomerase (5.3.3.3)
C12Y 503/03004	..	Muconolactone DELTA-isomerase (5.3.3.4)
C12Y 503/03005	..	Cholestenol DELTA-isomerase (5.3.3.5)
C12Y 503/03006	..	Methylitaconate DELTA-isomerase (5.3.3.6)
C12Y 503/03007	..	Aconitate DELTA-isomerase (5.3.3.7)
C12Y 503/03008	..	Dodecenoyl-CoA isomerase (5.3.3.8)
C12Y 503/03009	..	Prostaglandin-A1 DELTA-isomerase (5.3.3.9)

C12Y 503/0301	..	5-Carboxymethyl-2-hydroxymuconate DELTA-isomerase (5.3.3.10)
C12Y 503/03011	..	Isopiperitenone DELTA-isomerase (5.3.3.11)
C12Y 503/03012	..	L-Dopachrome isomerase (5.3.3.12)
C12Y 503/03013	..	Polyenoic fatty acid isomerase (5.3.3.13)
C12Y 503/03014	..	Trans-2-decenoyl-[acyl-carrier-protein isomerase (5.3.3.14)
C12Y 503/03015	..	Ascopyrone tautomerase (5.3.3.15)
C12Y 503/03016	..	4-Oxalomesaconate tautomerase (5.3.3.16)
C12Y 503/03017	..	Trans-2,3-dihydro-3-hydroxyanthranilate isomerase (5.3.3.17)
C12Y 503/03018	..	2-(1,2-Epoxy-1,2-dihydrophenyl)acetyl-CoA isomerase (5.3.3.18)
C12Y 503/04	.	transposing S-S bonds (5.3.4)
C12Y 503/04001	..	Protein disulfide-isomerase (5.3.4.1), i.e. disulfide bond-forming enzyme
C12Y 503/99	.	Other intramolecular oxidoreductases (5.3.99)
C12Y 503/99002	..	Prostaglandin-D synthase (5.3.99.2)
C12Y 503/99003	..	Prostaglandin-E synthase (5.3.99.3)
C12Y 503/99004	..	Prostaglandin-I synthase (5.3.99.4)
C12Y 503/99005	..	Thromboxane-A synthase (5.3.99.5)
C12Y 503/99006	..	Allene-oxide cyclase (5.3.99.6)
C12Y 503/99007	..	Styrene-oxide isomerase (5.3.99.7)
C12Y 503/99008	..	Capsanthin/capsorubin synthase (5.3.99.8)
C12Y 503/99009	..	Neoxanthin synthase (5.3.99.9)

#### **C12Y 504/00      Intramolecular transferases (5.4)**

C12Y 504/01	.	transferring acyl groups (5.4.1)
C12Y 504/01001	..	Lysolecithin acylmutase (5.4.1.1)
C12Y 504/01002	..	Precorrin-8X methylmutase (5.4.1.2)
C12Y 504/02	.	Phosphotransferases (phosphomutases) (5.4.2)
C12Y 504/02001	..	Phosphoglycerate mutase (5.4.2.1)
C12Y 504/02002	..	Phosphoglucomutase (5.4.2.2)
C12Y 504/02003	..	Phosphoacetylglucosamine mutase (5.4.2.3)
C12Y 504/02004	..	Bisphosphoglycerate mutase (5.4.2.4)
C12Y 504/02005	..	Phosphoglucomutase (glucose-cofactor) (5.4.2.5)
C12Y 504/02006	..	Beta-phosphoglucomutase (5.4.2.6)
C12Y 504/02007	..	Phosphopentomutase (5.4.2.7)
C12Y 504/02008	..	Phosphomannomutase (5.4.2.8)
C12Y 504/02009	..	Phosphoenolpyruvate mutase (5.4.2.9)
C12Y 504/0201	..	Phosphoglucoamine mutase (5.4.2.10)
C12Y 504/03	.	transferring amino groups (5.4.3)

C12Y 504/03002	..	Lysine 2,3-aminomutase (5.4.3.2)
C12Y 504/03003	..	Beta-lysine 5,6-aminomutase (5.4.3.3)
C12Y 504/03004	..	D-Lysine 5,6-aminomutase (5.4.3.4)
C12Y 504/03005	..	D-Ornithine 4,5-aminomutase (5.4.3.5)
C12Y 504/03006	..	Tyrosine 2,3-aminomutase (5.4.3.6)
C12Y 504/03007	..	Leucine 2,3-aminomutase (5.4.3.7)
C12Y 504/03008	..	Glutamate-1-semialdehyde 2,1-aminomutase (5.4.3.8)
C12Y 504/04	.	transferring hydroxy groups (5.4.4)
C12Y 504/04001	..	(Hydroxyamino)benzene mutase (5.4.4.1)
C12Y 504/04002	..	Isochorismate synthase (5.4.4.2)
C12Y 504/04003	..	3-(Hydroxyamino)phenol mutase (5.4.4.3)
C12Y 504/04004	..	Geraniol isomerase (5.4.4.4)
C12Y 504/04005	..	9,12-Octadecadienoate 8-hydroperoxide 8R-isomerase (5.4.4.5)
C12Y 504/04006	..	9,12-Octadecadienoate 8-hydroperoxide 8S-isomerase (5.4.4.6)
C12Y 504/99	.	transferring other groups (5.4.99)
C12Y 504/99001	..	Methylaspartate mutase (5.4.99.1)
C12Y 504/99002	..	Methylmalonyl-CoA mutase (5.4.99.2)
C12Y 504/99003	..	2-Acetolactate mutase (5.4.99.3)
C12Y 504/99004	..	2-Methyleneglutarate mutase (5.4.99.4)
C12Y 504/99005	..	Chorismate mutase (5.4.99.5)
C12Y 504/99007	..	Lanosterol synthase (5.4.99.7), i.e. oxidosqualene-lanosterol cyclase
C12Y 504/99008	..	Cycloartenol synthase (5.4.99.8)
C12Y 504/99009	..	UDP-galactopyranose mutase (5.4.99.9)
C12Y 504/99011	..	Isomaltulose synthase (5.4.99.11)
C12Y 504/99012	..	tRNA pseudouridine38-40 synthase (5.4.99.12)
C12Y 504/99013	..	Isobutyryl-CoA mutase (5.4.99.13)
C12Y 504/99014	..	4-Carboxymethyl-4-methylbutenolide mutase (5.4.99.14)
C12Y 504/99015	..	(1->4)-Alpha-D-glucan 1-alpha-D-glucosylmutase (5.4.99.15)
C12Y 504/99016	..	Maltose alpha-D-glucosyltransferase (5.4.99.16)
C12Y 504/99017	..	Squalene--hopene cyclase (5.4.99.17)
C12Y 504/99018	..	5-(Carboxyamino)imidazole ribonucleotide mutase (5.4.99.18)
C12Y 504/99019	..	16S rRNA pseudouridine516 synthase (5.4.99.19)
C12Y 504/9902	..	23S rRNA pseudouridine2457 synthase (5.4.99.20)
C12Y 504/99021	..	23S rRNA pseudouridine2604 synthase (5.4.99.21)
C12Y 504/99022	..	23S rRNA pseudouridine2605 synthase (5.4.99.22)
C12Y 504/99023	..	23S rRNA pseudouridine1911/1915/1917 synthase (5.4.99.23)
C12Y 504/99024	..	23S rRNA pseudouridine955/2504/2580 synthase (5.4.99.24)
C12Y 504/99025	..	tRNA pseudouridine55 synthase (5.4.99.25)
C12Y 504/99026	..	tRNA pseudouridine65 synthase (5.4.99.26)

C12Y 504/99027	..	tRNA pseudouridine13 synthase (5.4.99.27)
C12Y 504/99028	..	tRNA pseudouridine32 synthase (5.4.99.28)
C12Y 504/99029	..	23S rRNA pseudouridine746 synthase (5.4.99.29)
C12Y 504/9903	..	UDP-arabinopyranose mutase (5.4.99.30)
C12Y 504/99031	..	Thalianol synthase (5.4.99.31)
C12Y 504/99032	..	Protostadienol synthase (5.4.99.32)
C12Y 504/99033	..	Cucurbitadienol synthase (5.4.99.33)
C12Y 504/99034	..	Germanicol synthase (5.4.99.34)
C12Y 504/99035	..	Taraxerol synthase (5.4.99.35)
C12Y 504/99036	..	Isomultiflorenol synthase (5.4.99.36)
C12Y 504/99037	..	Dammaradiene synthase (5.4.99.37)
C12Y 504/99038	..	Camelliol C synthase (5.4.99.38)
C12Y 504/99039	..	Beta-amyrin synthase (5.4.99.39)
C12Y 504/9904	..	Alpha-amyrin synthase (5.4.99.40)
C12Y 504/99041	..	Lupeol synthase (5.4.99.41)
C12Y 504/99042	..	tRNA pseudouridine31 synthase (5.4.99.42)
C12Y 504/99043	..	21S rRNA pseudouridine2819 synthase (5.4.99.43)
C12Y 504/99044	..	Mitochondrial tRNA pseudouridine27/28 synthase (5.4.99.44)
C12Y 504/99045	..	tRNA pseudouridine38/39 synthase (5.4.99.45)
C12Y 504/99046	..	Shionone synthase (5.4.99.46)
C12Y 504/99047	..	Parkeol synthase (5.4.99.47)
C12Y 504/99048	..	Achilleol B synthase (5.4.99.48)
C12Y 504/99049	..	Glutinol synthase (5.4.99.49)
C12Y 504/9905	..	Friedelin synthase (5.4.99.50)
C12Y 504/99051	..	Baccharis oxide synthase (5.4.99.51)
C12Y 504/99052	..	Alpha-seco-amyrin synthase (5.4.99.52)
C12Y 504/99053	..	Marneral synthase (5.4.99.53)
C12Y 504/99054	..	Beta-seco-amyrin synthase (5.4.99.54)
C12Y 504/99055	..	Delta amyrin synthase (5.4.99.55)
C12Y 504/99056	..	Tirucalladienol synthase (5.4.99.56)

**C12Y 505/00****Intramolecular lyases (5.5)**

C12Y 505/01	.	Intramolecular lyases (5.5.1)
C12Y 505/01001	..	Muconate cycloisomerase (5.5.1.1)
C12Y 505/01002	..	3-Carboxy-cis,cis-muconate cycloisomerase (5.5.1.2)
C12Y 505/01003	..	Tetrahydroxypteridine cycloisomerase (5.5.1.3)
C12Y 505/01004	..	Inositol-3-phosphate synthase (5.5.1.4)
C12Y 505/01005	..	Carboxy-cis,cis-muconate cyclase (5.5.1.5)
C12Y 505/01006	..	Chalcone isomerase (5.5.1.6)

C12Y 505/01007	..	Chloromuconate cycloisomerase (5.5.1.7)
C12Y 505/01008	..	Bornyl diphosphate synthase (5.5.1.8)
C12Y 505/01009	..	Cycloeucalenol cycloisomerase (5.5.1.9)
C12Y 505/0101	..	Alpha-pinene-oxide decyclase (5.5.1.10)
C12Y 505/01011	..	Dichloromuconate cycloisomerase (5.5.1.11)
C12Y 505/01012	..	Copalyl diphosphate synthase (5.5.1.12)
C12Y 505/01013	..	Ent-copalyl diphosphate synthase (5.5.1.13)
C12Y 505/01014	..	Syn-copalyl-diphosphate synthase (5.5.1.14)
C12Y 505/01015	..	Terpentedienyl-diphosphate synthase (5.5.1.15)
C12Y 505/01016	..	Halimadienyl-diphosphate synthase (5.5.1.16)
C12Y 505/01017	..	(S)-Beta-macrocarpene synthase (5.5.1.17)
C12Y 505/01018	..	Lycopene epsilon-cyclase (5.5.1.18)
C12Y 505/01019	..	Lycopene beta-cyclase (5.5.1.19)
C12Y 505/0102	..	Prosolanapyrone-III cycloisomerase (5.5.1.20)

#### **C12Y 599/00      Other isomerases (5.99)**

C12Y 599/01	.	Other isomerases (5.99.1)
C12Y 599/01001	..	Thiocyanate isomerase (5.99.1.1)
C12Y 599/01002	..	DNA topoisomerase (5.99.1.2)
C12Y 599/01003	..	DNA topoisomerase (ATP-hydrolysing) (5.99.1.3)
C12Y 599/01004	..	2-Hydroxychromene-2-carboxylate isomerase (5.99.1.4)

#### **C12Y 600/00      Ligases (6.)**

##### **C12Y 601/00      Ligases forming carbon-oxygen bonds (6.1)**

C12Y 601/01	.	Ligases forming aminoacyl-tRNA and related compounds (6.1.1)
C12Y 601/01001	..	Tyrosine-tRNA ligase (6.1.1.1)
C12Y 601/01002	..	Tryptophan-tRNA ligase (6.1.1.2)
C12Y 601/01003	..	Threonine-tRNA ligase (6.1.1.3)
C12Y 601/01004	..	Leucine--tRNA ligase (6.1.1.4)
C12Y 601/01005	..	Isoleucine-tRNA ligase (6.1.1.5)
C12Y 601/01006	..	Lysine-tRNA ligase (6.1.1.6)
C12Y 601/01007	..	Alanine--tRNA ligase (6.1.1.7)
C12Y 601/01009	..	Valine--tRNA ligase (6.1.1.9)
C12Y 601/0101	..	Methionine-tRNA ligase (6.1.1.10)
C12Y 601/01011	..	Serine--tRNA ligase (6.1.1.11)
C12Y 601/01012	..	Aspartate-tRNA ligase (6.1.1.12)
C12Y 601/01013	..	D-Alanine--poly(phosphoribitol) ligase (6.1.1.13)



C12Y 601/01014	..	Glycine-tRNA ligase (6.1.1.14)
C12Y 601/01015	..	Proline--tRNA ligase (6.1.1.15)
C12Y 601/01016	..	Cysteine-tRNA ligase (6.1.1.16)
C12Y 601/01017	..	Glutamate-tRNA ligase (6.1.1.17)
C12Y 601/01018	..	Glutamine--tRNA ligase (6.1.1.18)
C12Y 601/01019	..	Arginine--tRNA ligase (6.1.1.19)
C12Y 601/0102	..	Phenylalanine-tRNA ligase (6.1.1.20)
C12Y 601/01021	..	Histidine-tRNA ligase (6.1.1.21)
C12Y 601/01022	..	Asparagine-tRNA ligase (6.1.1.22)
C12Y 601/01023	..	Aspartate--tRNA(Asn) ligase (6.1.1.23)
C12Y 601/01024	..	Glutamate--tRNA(Gln) ligase (6.1.1.24)
C12Y 601/01025	..	Lysine--tRNA(Pyl) ligase (6.1.1.25)
C12Y 601/01026	..	Pyrrolysine-tRNA <sup>Pyl</sup> ligase (6.1.1.26)
C12Y 601/01027	..	O-Phosphoserine--tRNA ligase (6.1.1.27)
C12Y 601/02	.	Acid--alcohol ligases ( <a href="#">ester synthases</a> )(6.1.2)
C12Y 601/02001	..	D-Alanine--(R)-lactate ligase (6.1.2.1)

## **C12Y 602/00      Ligases forming carbon-sulfur bonds (6.2)**

C12Y 602/01	.	Acid-Thiol Ligases (6.2.1)
C12Y 602/01001	..	Acetate-CoA ligase (6.2.1.1)
C12Y 602/01002	..	Butyrate-CoA ligase (6.2.1.2)
C12Y 602/01003	..	Long-chain-fatty-acid-CoA ligase (6.2.1.3)
C12Y 602/01004	..	Succinate-CoA ligase (GDP-forming) (6.2.1.4)
C12Y 602/01005	..	Succinate-CoA ligase (ADP-forming) (6.2.1.5)
C12Y 602/01006	..	Glutarate--CoA ligase (6.2.1.6)
C12Y 602/01007	..	Cholate--CoA ligase (6.2.1.7)
C12Y 602/01008	..	Oxalate--CoA ligase (6.2.1.8)
C12Y 602/01009	..	Malate--CoA ligase (6.2.1.9)
C12Y 602/0101	..	Acid--CoA ligase (GDP-forming) (6.2.1.10)
C12Y 602/01011	..	Biotin--CoA ligase (6.2.1.11)
C12Y 602/01012	..	4-Coumarate-CoA ligase (6.2.1.12)
C12Y 602/01013	..	Acetate--CoA ligase (ADP-forming) (6.2.1.13)
C12Y 602/01014	..	6-Carboxyhexanoate--CoA ligase (6.2.1.14)
C12Y 602/01015	..	Arachidonate--CoA ligase (6.2.1.15)
C12Y 602/01016	..	Acetoacetate-CoA ligase (6.2.1.16)
C12Y 602/01017	..	Propionate--CoA ligase (6.2.1.17)
C12Y 602/01018	..	Citrate--CoA ligase (6.2.1.18)
C12Y 602/01019	..	Long-chain-fatty-acid--luciferin-component ligase (6.2.1.19)

C12Y 602/0102	..	Long-chain-fatty-acid--[acyl-carrier-protein ligase (6.2.1.20)
C12Y 602/01022	..	[Citrate (pro-3S)-lyase ligase (6.2.1.22)
C12Y 602/01023	..	Dicarboxylate--CoA ligase (6.2.1.23)
C12Y 602/01024	..	Phytanate--CoA ligase (6.2.1.24)
C12Y 602/01025	..	Benzoate--CoA ligase (6.2.1.25)
C12Y 602/01026	..	O-Succinylbenzoate-CoA ligase (6.2.1.26)
C12Y 602/01027	..	4-Hydroxybenzoate--CoA ligase (6.2.1.27)
C12Y 602/01028	..	3-Alpha,7-alpha-dihydroxy-5-beta-cholestanate--CoA ligase (6.2.1.28)
C12Y 602/0103	..	Phenylacetate--CoA ligase (6.2.1.30)
C12Y 602/01031	..	2-Furoate--CoA ligase (6.2.1.31)
C12Y 602/01032	..	Anthranilate--CoA ligase (6.2.1.32)
C12Y 602/01033	..	4-Chlorobenzoate--CoA ligase (6.2.1.33)
C12Y 602/01034	..	Trans-feruloyl-CoA synthase (6.2.1.34)
C12Y 602/01035	..	ACP-SH:acetate ligase (6.2.1.35)
C12Y 602/01036	..	3-Hydroxypropionyl-CoA synthase (6.2.1.36)
C12Y 602/01037	..	3-Hydroxybenzoate--CoA ligase (6.2.1.37)

**C12Y 603/00****Ligases forming carbon-nitrogen bonds (6.3)**

C12Y 603/01	.	Acid-ammonia (or amine)ligases (amide synthases)(6.3.1)
C12Y 603/01001	..	Aspartate--ammonia ligase (6.3.1.1)
C12Y 603/01002	..	Glutamate-ammonia ligase (6.3.1.2)
C12Y 603/01004	..	Aspartate--ammonia ligase (ADP-forming) (6.3.1.4)
C12Y 603/01005	..	NAD+ synthase (6.3.1.5)
C12Y 603/01006	..	Glutamate--ethylamine ligase (6.3.1.6)
C12Y 603/01007	..	4-Methyleneglutamate--ammonia ligase (6.3.1.7)
C12Y 603/01008	..	Glutathionylspermidine synthase (6.3.1.8)
C12Y 603/01009	..	Trypanothione synthase (6.3.1.9)
C12Y 603/0101	..	Adenosylcobinamide-phosphate synthase (6.3.1.10)
C12Y 603/01011	..	Glutamate--putrescine ligase (6.3.1.11)
C12Y 603/01012	..	D-Aspartate ligase (6.3.1.12)
C12Y 603/01013	..	L-Cysteine:1D-myo-inositol 2-amino-2-deoxy-alpha-D-glucopyranoside ligase (6.3.1.13)
C12Y 603/01014	..	Diphthine--ammonia ligase (6.3.1.14)
C12Y 603/02	.	Acid—amino-acid ligases (peptide synthases)(6.3.2)
C12Y 603/02001	..	Pantoate-beta-alanine ligase (6.3.2.1)
C12Y 603/02002	..	Glutamate-cysteine ligase (6.3.2.2)
C12Y 603/02003	..	Glutathione synthase (6.3.2.3)
C12Y 603/02004	..	D-Alanine-D-alanine ligase (6.3.2.4)
C12Y 603/02005	..	Phosphopantothenate--cysteine ligase (6.3.2.5)

C12Y 603/02006	..	Phosphoribosylaminoimidazolesuccinocarboxamide synthase (6.3.2.6)
C12Y 603/02007	..	UDP-N-acetylmuramoyl-L-alanyl-D-glutamate--L-lysine ligase (6.3.2.7)
C12Y 603/02008	..	UDP-N-acetylmuramate-L-alanine ligase (6.3.2.8)
C12Y 603/02009	..	UDP-N-acetylmuramoyl-L-alanine-D-glutamate ligase (6.3.2.9)
C12Y 603/0201	..	UDP-N-acetylmuramoyl-tripeptide-D-alanyl-D-alanine ligase (6.3.2.10)
C12Y 603/02011	..	Carnosine synthase (6.3.2.11)
C12Y 603/02012	..	Dihydrofolate synthase (6.3.2.12)
C12Y 603/02013	..	UDP-N-acetylmuramoyl-L-alanyl-D-glutamate-2,6-diaminopimelate ligase (6.3.2.13)
C12Y 603/02014	..	2,3-Dihydroxybenzoate--serine ligase (6.3.2.14)
C12Y 603/02016	..	D-Alanine--alanyl-poly(glycerolphosphate) ligase (6.3.2.16)
C12Y 603/02017	..	Tetrahydrofolate synthase (6.3.2.17)
C12Y 603/02018	..	Gamma-glutamylhistamine synthase (6.3.2.18)
C12Y 603/02019	..	Ubiquitin-protein ligase (6.3.2.19), i.e. ubiquitin-conjugating enzyme
C12Y 603/0202	..	Indoleacetate--lysine synthetase (6.3.2.20)
C12Y 603/02021	..	Ubiquitin--calmodulin ligase (6.3.2.21)
C12Y 603/02023	..	Homoglutathione synthase (6.3.2.23)
C12Y 603/02024	..	Tyrosine--arginine ligase (6.3.2.24)
C12Y 603/02025	..	Tubulin-tyrosine ligase (6.3.2.25)
C12Y 603/02026	..	N-(5-Amino-5-carboxypentanoyl)-L-cysteinyl-D-valine synthase (6.3.2.26)
C12Y 603/02027	..	Aerobactin synthase (6.3.2.27)
C12Y 603/02028	..	L-Amino-acid alpha-ligase (6.3.2.28)
C12Y 603/02029	..	Cyanophycin synthase (L-aspartate-adding) (6.3.2.29)
C12Y 603/0203	..	Cyanophycin synthase (L-arginine-adding) (6.3.2.30)
C12Y 603/02031	..	Coenzyme F420-0:L-glutamate ligase (6.3.2.31)
C12Y 603/02032	..	Coenzyme gamma-F420-2:alpha-L-glutamate ligase (6.3.2.32)
C12Y 603/02033	..	Tetrahydrosarcinapterin synthase (6.3.2.33)
C12Y 603/02034	..	Coenzyme F420-1:gamma-L-glutamate ligase (6.3.2.34)
C12Y 603/02035	..	D-Alanine--D-serine ligase (6.3.2.35)
C12Y 603/02036	..	4-Phosphopantoate--beta-alanine ligase (6.3.2.36)
C12Y 603/02037	..	UDP-N-acetylmuramoyl-L-alanyl-D-glutamate--D-lysine ligase (6.3.2.37)
C12Y 603/03	..	Cyclo-ligases (6.3.3)
C12Y 603/03001	..	Phosphoribosylformylglycinamide cyclo-ligase (6.3.3.1)
C12Y 603/03002	..	5-Formyltetrahydrofolate cyclo-ligase (6.3.3.2)
C12Y 603/03003	..	Dethiobiotin synthase (6.3.3.3)
C12Y 603/03004	..	(Carboxyethyl)arginine beta-lactam-synthase (6.3.3.4)
C12Y 603/04	..	Other carbon-nitrogen ligases (6.3.4)
C12Y 603/04001	..	GMP synthase (6.3.4.1)
C12Y 603/04002	..	CTP synthase (6.3.4.2)

C12Y 603/04003	..	Formate--tetrahydrofolate ligase (6.3.4.3)
C12Y 603/04004	..	Adenylosuccinate synthase (6.3.4.4)
C12Y 603/04005	..	Argininosuccinate synthase (6.3.4.5)
C12Y 603/04006	..	Urea carboxylase (6.3.4.6)
C12Y 603/04007	..	Ribose-5-phosphate--ammonia ligase (6.3.4.7)
C12Y 603/04008	..	Imidazoleacetate--phosphoribosyldiphosphate ligase (6.3.4.8)
C12Y 603/04009	..	Biotin--[methylmalonyl-CoA-carboxytransferase ligase (6.3.4.9)
C12Y 603/0401	..	Biotin--[propionyl-CoA-carboxylase (ATP-hydrolyzing) ligase (6.3.4.10)
C12Y 603/04011	..	Biotin--[methylcrotonoyl-CoA-carboxylase ligase (6.3.4.11)
C12Y 603/04012	..	Glutamate--methylamine ligase (6.3.4.12)
C12Y 603/04013	..	Phosphoribosylamine-glycine ligase (6.3.4.13)
C12Y 603/04014	..	Biotin carboxylase (6.3.4.14)
C12Y 603/04015	..	Biotin-[acetyl-CoA-carboxylase] ligase (6.3.4.15)
C12Y 603/04016	..	Carbamoyl-phosphate synthase (ammonia) (6.3.4.16)
C12Y 603/04017	..	Formate--dihydrofolate ligase (6.3.4.17)
C12Y 603/04018	..	5-(Carboxyamino)imidazole ribonucleotide synthase (6.3.4.18)
C12Y 603/04019	..	tRNA(Ile)-lysidine synthetase (6.3.4.19)
C12Y 603/05	.	Carbon-nitrogen ligases with glutamine as amido-N-donor (6.3.5)
C12Y 603/05001	..	NAD <sup>+</sup> synthase (glutamine-hydrolyzing) (6.3.5.1)
C12Y 603/05002	..	GMP synthase (glutamine-hydrolysing) (6.3.5.2), i.e. glutamine amidotransferase
C12Y 603/05003	..	Phosphoribosylformylglycinamide synthase (6.3.5.3)
C12Y 603/05004	..	Asparagine synthase (glutamine-hydrolyzing) (6.3.5.4)
C12Y 603/05005	..	Carbamoyl-phosphate synthase (glutamine-hydrolysing) (6.3.5.5)
C12Y 603/05006	..	Asparaginyl-tRNA synthase (glutamine-hydrolyzing) (6.3.5.6)
C12Y 603/05007	..	GlutaminytRNA synthase (glutamine-hydrolyzing) (6.3.5.7)
C12Y 603/05009	..	Hydrogenobyrinic acid a,c-diamide synthase (glutamine-hydrolyzing) (6.3.5.9)
C12Y 603/0501	..	Adenosylcobyrinic acid synthase (glutamine-hydrolyzing) (6.3.5.10)
C12Y 603/05011	..	Cobyrinate a,c-diamide synthase (glutamine-hydrolyzing) (6.3.5.11)

## **C12Y 604/00      Ligases forming carbon-carbon bonds (6.4)**

C12Y 604/01	.	Ligases forming carbon-carbon bonds (6.4.1)
C12Y 604/01001	..	Pyruvate carboxylase (6.4.1.1)
C12Y 604/01002	..	Acetyl-CoA carboxylase (6.4.1.2)
C12Y 604/01003	..	Propionyl-CoA carboxylase (6.4.1.3)
C12Y 604/01004	..	Methylcrotonoyl-CoA carboxylase (6.4.1.4)
C12Y 604/01005	..	Geranoyl-CoA carboxylase (6.4.1.5)
C12Y 604/01006	..	Acetone carboxylase (6.4.1.6)
C12Y 604/01007	..	2-Oxoglutarate carboxylase (6.4.1.7)

C12Y 604/01008 . . Acetophenone carboxylase (6.4.1.8)

**C12Y 605/00 Ligases forming phosphoric ester bonds (6.5)**

C12Y 605/01 . forming phosphoric ester bonds (6.5.1)

C12Y 605/01001 . . DNA ligase (ATP) (6.5.1.1)

C12Y 605/01002 . . DNA ligase (NAD+) (6.5.1.2)

C12Y 605/01003 . . RNA ligase (ATP) (6.5.1.3)

C12Y 605/01004 . . RNA-3'-phosphate cyclase (6.5.1.4)

**C12Y 606/00 Ligases forming nitrogen-metal bonds (6.6)**

C12Y 606/01 . forming coordination complexes (6.6.1)

C12Y 606/01001 . . Magnesium chelatase (6.6.1.1)

C12Y 606/01002 . . Cobaltochelatase (6.6.1.2)