

CPC**COOPERATIVE PATENT CLASSIFICATION****C07K**

PEPTIDES (peptides in foodstuffs [A23](#); obtaining protein compositions for foodstuffs, working-up proteins for foodstuffs [A23J](#); preparations for medicinal purposes [A61K](#); peptides containing beta-lactam rings [C07D](#); cyclic dipeptides not having in their molecule any other peptide link than those which form their ring, e.g. piperazine-2,5-diones, [C07D](#); ergot alkaloids of the cyclic peptide type [C07D 519/02](#) ; macromolecular compounds having statistically distributed amino acid units in their molecules, i.e. when the preparation does not provide for a specific; but for a random sequence of the amino acid units, homopolyamides and block copolyamides derived from amino acids [C08G 69/00](#) ; macromolecular products derived from proteins [C08H 1/00](#) ; preparation of glue or gelatine [C09H](#); single cell proteins, enzymes [C12N](#); genetic engineering processes for obtaining peptides [C12N 15/00](#) ; compositions for measuring or testing processes involving enzymes [C12Q](#); investigation or analysis of biological material [G01N 33/00](#))

NOTE

In this subclass, the following terms or expressions are used with the meanings indicated:

- "amino acids" are compounds in which at least one amino group and at least one carboxyl group are bound to the same carbon skeleton and the nitrogen atom of the amino group may form part of a ring;
- "normal peptide link" is one between an alpha-amino group of an amino acid and the carboxyl group - in position 1 - of another alpha-amino acid;
- "abnormal peptide link" is a link where at least one of the linked amino acids is not an alpha-amino acid or a link formed by at least one carboxyl or amino group being part of the side chain of a alpha-amino acid;
- "peptides" are compounds containing at least two amino acid units, which are bound through at least one normal peptide link, including oligopeptides, polypeptides and proteins, where:
 - a. "linear peptides" may comprise rings formed through S-S bridges, or through a hydroxy- or mercapto-amino acid and the carboxyl group of another amino acid, (e.g. peptide lactones) but do not comprise rings which are formed only through peptide links;
 - b. "cyclic peptides" are peptides comprising at least one ring formed only through peptide links; the cyclisation may occur only through normal peptide links or through abnormal peptide links, e.g. through the 4-amino group of 2,4-diamino-butanoic acid.

Thus, cyclic compounds in which at least one link in the ring is a non-peptide link

are considered as "linear peptides";

- "depsipeptides" are compounds containing a sequence of at least two alpha-amino acids and at least one alpha-hydroxy carboxylic acid, which are bound through at least one normal peptide link and ester links, derived from the hydroxy carboxylic acids, where:

a. "linear depsipeptides" may comprise rings formed through S-S bridges, or through an hydroxy or a mercapto group of an hydroxy- or mercapto-amino acid and the carboxyl group of another amino- of hydroxy-acid but do not comprise rings formed only through peptide or ester links derived from hydroxy carboxylic acids,

e.g. Gly-Ala-Gly-OCH₂CO₂H and Gly-OCH₂CO-Ala-Gly are considered as "linear depsipeptides", but HOCH₂CO-Gly-Ala-Gly does not contain an ester link, and is thus a derivative of Gly-Ala-Gly which is covered by [C07K 5/08](#) ;

b. "cyclic depsipeptides" are peptides containing at least one ring formed only through peptide or ester links - derived from hydroxy carboxylic acids - ,

e.g. Gly-Ala-Gly-OCH₂CO.

Fragments of peptides or peptides modified by removal or addition of amino acids, by substitution of amino acids by others, or by combination of these modifications, are classified as the parent peptides. However, fragments of peptides having only four or less amino acids are also classified in group [C07K 5/00](#) .

Peptides prepared by chemical processes and having an amino acid sequence derived from naturally occurring peptides are classified with the natural one.

Peptides prepared by recombinant DNA technology are not classified according to the host, but according to the original peptide expressed, e.g. HIV peptide expressed in E. coli is classified with HIV peptides.

When classifying in this subclass, classification is also made in group [B01D 15/08](#) insofar as subject matter of general interest relating to chromatography is concerned.

WARNING

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

[C07K 5/023](#) covered by [C07K 5/0202](#)

[C07K 5/027](#) covered by [C07K 5/0205](#)

[C07K 5/03](#) covered by [C07K 5/0207](#)

[C07K 5/033](#) covered by [C07K 5/021](#)

[C07K 5/037](#) covered by [C07K 5/0215](#)

[C07K 5/062](#) covered by [C07K 5/06017](#)
[C07K 5/065](#) covered by [C07K 5/06078](#)
[C07K 5/068](#) covered by [C07K 5/06086](#)
[C07K 5/072](#) covered by [C07K 5/06104](#)
[C07K 5/075](#) covered by [C07K 5/0613](#)
[C07K 5/078](#) covered by [C07K 5/06139](#)
[C07K 5/083](#) covered by [C07K 5/0804](#)
[C07K 5/087](#) covered by [C07K 5/0812](#)
[C07K 5/09](#) covered by [C07K 5/0815](#)
[C07K 5/093](#) covered by [C07K 5/0819](#)
[C07K 5/097](#) covered by [C07K 5/0821](#)
[C07K 5/103](#) covered by [C07K 5/1005](#)
[C07K 5/107](#) covered by [C07K 5/1016](#)
[C07K 5/11](#) covered by [C07K 5/1019](#)
[C07K 5/113](#) covered by [C07K 5/1021](#)
[C07K 5/117](#) covered by [C07K 5/1024](#)
[C07K 14/185](#) covered by [C07K 14/1816](#)
[C07K 14/725](#) covered by [C07K 14/705](#)
[C07K 14/73](#) covered by [C07K 14/70514](#)
[C07K 14/735](#) covered by [C07K 14/70535](#)
[C07K 14/74](#) covered by [C07K 14/70539](#)

C07K 1/00

General methods for the preparation of peptides { i.e. processes for the organic chemical preparation of peptides or proteins of any length }

C07K 1/003

- . { by transforming the C-terminal amino acid to amides }

C07K 1/006

- . { of peptides containing derivatised side chain amino acids }

C07K 1/02

- . in solution {([C07K 1/003](#) , [C07K 1/006](#) take precedence)}

C07K 1/023

- .. { using racemisation inhibiting agents }

C07K 1/026

- .. { by fragment condensation in solution }

C07K 1/04

- . on carriers {([C07K 1/003](#) , [C07K 1/006](#) take precedence)}

C07K 1/042

- .. { characterised by the nature of the carrier }

C07K 1/045

- .. { using devices to improve synthesis, e.g. reactors, special vessels }

C07K 1/047

- .. { Simultaneous synthesis of different peptide species; Peptide libraries }

C07K 1/06

- . using protecting groups or activating agents {([C07K 1/003](#) , [C07K 1/006](#) take precedence)}

C07K 1/061

- .. { using protecting groups }

C07K 1/062

- ... { for alpha- or omega-carboxy functions }

C07K 1/063

- ... { for alpha-amino functions }

C07K 1/064

- ... { for omega-amino or -guanidino functions }

C07K 1/065

- ... { for hydroxy functions, not being part of carboxy functions }

C07K 1/066

- ... { for omega-amido functions }

C07K 1/067

- ... { for sulfur-containing functions }

- C07K 1/068 ... { for heterocyclic side chains }
- C07K 1/08 .. using activating agents {(C07K 1/003 , C07K 1/006 take precedence)}
- C07K 1/082 ... { containing phosphorus }
- C07K 1/084 ... { containing nitrogen }
- C07K 1/086 ... { containing sulfur }
- C07K 1/088 ... { containing other elements, e.g. B, Si, As }

- C07K 1/10 . using coupling agents {(C07K 1/006 takes precedence)}

- C07K 1/107 . by chemical modification of precursor peptides
- C07K 1/1072 .. { by covalent attachment of residues or functional groups }
- C07K 1/1075 ... { by covalent attachment of amino acids or peptide residues }
- C07K 1/1077 ... { by covalent attachment of residues other than amino acids or peptide residues, e.g. sugars, polyols, fatty acids }

- C07K 1/113 .. without change of the primary structure
- C07K 1/1133 ... { by redox-reactions involving cystein/cystin side chains }
- C07K 1/1136 ... { by reversible modification of the secondary, tertiary or quarternary structure, e.g. using denaturing or stabilising agents }

- C07K 1/12 . by hydrolysis { i.e. solvolysis in general }
- C07K 1/122 .. { Hydrolysis with acids different from HF }
- C07K 1/124 .. { Hydrazinolysis }
- C07K 1/126 .. { Aminolysis }
- C07K 1/128 .. { sequencing }

- C07K 1/13 . Labelling of peptides

- C07K 1/14 . Extraction; Separation; Purification
- C07K 1/145 .. { by extraction or solubilisation }
- C07K 1/16 .. by chromatography
- C07K 1/165 ... { mixed-mode chromatography }
- C07K 1/18 ... Ion-exchange chromatography
- C07K 1/20 ... Partition-, reverse-phase or hydrophobic interaction chromatography
- C07K 1/22 ... Affinity chromatography or related techniques based upon selective absorption processes

- C07K 1/24 .. by electrochemical means
- C07K 1/26 ... Electrophoresis
- C07K 1/28 Isoelectric focusing
- C07K 1/285 { multi dimensional electrophoresis }
- C07K 1/30 .. by precipitation
- C07K 1/303 ... { by salting out }
- C07K 1/306 ... { by crystallization }

NOTE

Large single crystals of proteins from solutions are classified in [C30B 7/00](#) for the method and in [C30B 29/58](#) for the crystal

- C07K 1/32 . . . as complexes
- C07K 1/34 . . by filtration, ultrafiltration or reverse osmosis
- C07K 1/36 . . by a combination of two or more processes of different types

C07K 2/00 Peptides of undefined number of amino acids; Derivatives thereof

C07K 4/00 Peptides having up to 20 amino acids in an undefined or only partially defined sequence; Derivatives thereof

- C07K 4/02 . from viruses
- C07K 4/04 . from bacteria
- C07K 4/06 . from fungi
- C07K 4/08 . from algae; from lichens
- C07K 4/10 . from plants
- C07K 4/12 . from animals; from humans

NOTE

If no indication to the contrary is given, all amino acids are considered to be in the natural L-form

C07K 5/00 Peptides containing up to four amino acids in a fully defined sequence; Derivatives thereof

- C07K 5/02 . containing at least one abnormal peptide link
- C07K 5/0202 . . { containing the structure -NH-X-X-C(=O)-, X being an optionally substituted carbon atom or a heteroatom, e.g. beta-amino acids }
- C07K 5/0205 . . { containing the structure -NH-(X)3-C(=O)-, e.g. statine or derivatives thereof }
- C07K 5/0207 . . { containing the structure -NH-(X)4-C(=O)-, e.g. `isosters`, replacing two amino acids }
- C07K 5/021 . . { containing the structure -NH-(X)_n-C(=O)-, n being 5 or 6; for n > 6, classification in [C07K 5/06](#) to [C07K 5/10](#), according to the moiety having normal peptide bonds }
- C07K 5/0212 . . { containing the structure -N-C-N-C(=O)-, e.g. retro-inverso peptides }
- C07K 5/0215 . . { containing natural amino acids, forming a peptide bond via their side chain functional group, e.g. epsilon-Lys, gamma-Glu }
- C07K 5/0217 . . { containing the structure -C(=O)-C-N-C(=O)-N-C-C(=O)- }

- C07K 5/022 .. { containing the structure -X-C(=O)-(C)n-N-C-C(=O)-Y-; X and Y being heteroatoms; n being 1 or 2 }
- C07K 5/0222 ... { with the first amino acid being heterocyclic, e.g. Pro, Trp }
- C07K 5/0225 .. { containing the structure -N-C-C(=O)-N-C(=O)-C-N- }
- C07K 5/0227 .. { containing the (partial) peptide sequence -Phe-His-NH-(X)₂-C(=O)-, e.g. Renin-inhibitors with n = 2 - 6; for n > 6 see [C07K 5/06](#) to [C07K 5/10](#) }
- C07K 5/04 . containing only normal peptide links

NOTE

In groups [C07K 5/06](#) to [C07K 5/10](#) the following terms or expressions are used with the meaning indicated:

neutral: amino acids having in the sidechain the same number of amino groups and carboxylic acid groups or derivatives thereof, e.g. Gly;
 basic: amino acids having in the sidechain more amino groups than carboxylic acid groups or derivatives thereof, e.g. Arg;
 acidic: amino acids having in the sidechain more carboxylic acid groups or derivatives thereof than amino groups, e.g. Asp;
 aliphatic: amino acids having only acyclic carbon atoms in the sidechain, e.g. Ala aromatic;
 cycloaliphatic: amino acids having a carbocyclic ring in the sidechain, e.g. Phe
 heterocyclic: amino acids wherein the sidechain contains or is part of a heteroring, e.g. Pro;
 side chain: the R radical in the optionally functionalised amino acid R-CH(NH₂)CO₂H)

- C07K 5/06 .. Dipeptides
- C07K 5/06008 ... { with the first amino acid being neutral }
- C07K 5/06017 { and aliphatic }
- C07K 5/06026 { the side chain containing 0 or 1 carbon atom, i.e. Gly or Ala }
- C07K 5/06034 { the side chain containing 2 to 4 carbon atoms }
- C07K 5/06043 { Leu-amino acid }
- C07K 5/06052 { Val-amino acid }
- C07K 5/0606 { the side chain containing heteroatoms not provided for by [C07K 5/06086](#) to [C07K 5/06139](#), e.g. Ser, Met, Cys, Thr }
- C07K 5/06069 { Ser-amino acid }
- C07K 5/06078 { and aromatic or cycloaliphatic }
- C07K 5/06086 ... { with the first amino acid being basic }
- C07K 5/06095 { Arg-amino acid }
- C07K 5/06104 ... { with the first amino acid being acidic }
- C07K 5/06113 { Asp- or Asn-amino acid }
- C07K 5/06121 { the second amino acid being aromatic or cycloaliphatic }

| | | |
|--------------|-------|---|
| C07K 5/0613 | ..... | { Aspartame } |
| C07K 5/06139 | ... | { with the first amino acid being heterocyclic } |
| C07K 5/06147 | .... | { and His-amino acid; Derivatives thereof } |
| C07K 5/06156 | .... | { and Trp-amino acid; Derivatives thereof } |
| C07K 5/06165 | .... | { and Pro-amino acid; Derivatives thereof } |
| C07K 5/06173 | .... | { and Glp-amino acid; Derivatives thereof } |
| C07K 5/06182 | .... | { and Pristinamycin II; Derivatives thereof } |
| C07K 5/06191 | ... | { containing heteroatoms different from O, S, or N } |
| C07K 5/08 | .. | Tripeptides |
| C07K 5/0802 | ... | { with the first amino acid being neutral } |
| C07K 5/0804 | .... | { and aliphatic } |
| C07K 5/0806 | ..... | { the side chain containing 0 or 1 carbon atoms, i.e. Gly, Ala } |
| C07K 5/0808 | ..... | { the side chain containing 2 to 4 carbon atoms, e.g. Val, Ile, Leu } |
| C07K 5/081 | ..... | { the side chain containing O or S as heteroatoms, e.g. Cys, Ser } |
| C07K 5/0812 | .... | { and aromatic or cycloaliphatic } |
| C07K 5/0815 | ... | { with the first amino acid being basic } |
| C07K 5/0817 | .... | { the first amino acid being Arg } |
| C07K 5/0819 | ... | { with the first amino acid being acidic } |
| C07K 5/0821 | ... | { with the first amino acid being heterocyclic, e.g. His, Pro, Trp } |
| C07K 5/0823 | .... | { and Pro-amino acid; Derivatives thereof } |
| C07K 5/0825 | .... | { and Glp-amino acid; Derivatives thereof } |
| C07K 5/0827 | ... | { containing heteroatoms different from O, S, or N } |
| C07K 5/10 | .. | Tetrapeptides |
| C07K 5/1002 | ... | { with the first amino acid being neutral } |
| C07K 5/1005 | .... | { and aliphatic } |
| C07K 5/1008 | ..... | { the side chain containing 0 or 1 carbon atoms, i.e. Gly, Ala } |
| C07K 5/101 | ..... | { the side chain containing 2 to 4 carbon atoms, e.g. Val, Ile, Leu } |
| C07K 5/1013 | ..... | { the side chain containing O or S as heteroatoms, e.g. Cys, Ser } |
| C07K 5/1016 | .... | { and aromatic or cycloaliphatic } |
| C07K 5/1019 | ... | { with the first amino acid being basic } |
| C07K 5/1021 | ... | { with the first amino acid being acidic } |
| C07K 5/1024 | ... | { with the first amino acid being heterocyclic } |
| C07K 5/1027 | ... | { containing heteroatoms different from O, S, or N } |
| C07K 5/12 | .. | Cyclic peptides { with only normal peptide bonds in the ring } |

NOTE

Cyclic peptides containing at least one abnormal peptide link are classified as linear peptides

| | | |
|------------|-----|-------------------|
| C07K 5/123 | ... | { Tripeptides } |
| C07K 5/126 | ... | { Tetrapeptides } |

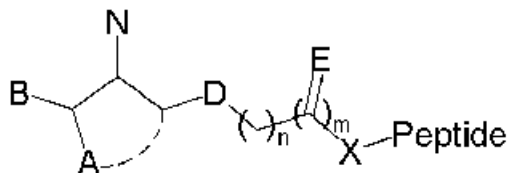
C07K 7/00**Peptides having 5 to 20 amino acids in a fully defined sequence; Derivatives thereof****NOTE**

In this subgroup cyclic compounds related to specific compounds which are classified in a specific group, e.g. [C07K 7/062](#) , are classified in this specific group only

- C07K 7/02 . Linear peptides containing at least one abnormal peptide link
- C07K 7/04 . Linear peptides containing only normal peptide links
- C07K 7/06 . . having 5 to 11 amino acids
- C07K 7/062 . . . { Serum thymic factor }
- C07K 7/065 . . . { Thymic humoral factor }
- C07K 7/067 . . . { Hemoregulatory peptides based on sequence Glp-Glu-Asp-Cys-Lys }
- C07K 7/08 . . having 12 to 20 amino acids ([gastrins C07K 14/595](#) ; [somatostatins C07K 14/655](#) ; [melanotropins C07K 14/68](#))
- C07K 7/083 . . . { Neurotensin }
- C07K 7/086 . . . { Bombesin; Related peptides (having more than 20 amino acids [C07K 14/57572](#)) }
- C07K 7/14 . . Angiotensins: Related peptides
- C07K 7/16 . . Oxytocins; Vasopressins; Related peptides
- C07K 7/18 . . Kallidins; Bradykinins; Related peptides
- C07K 7/22 . . { Tachykinins, e.g. } [Eledoisins](#), { [Substance P](#) }; Related peptides
- C07K 7/23 . . Luteinising hormone-releasing hormone (LHRH); Related peptides
- C07K 7/28 . . Gramicidins A, B, D; Related peptides
- C07K 7/50 . Cyclic peptides containing at least one abnormal peptide link
- C07K 7/52 . . with only normal peptide links in the ring
- C07K 7/54 . . with at least one abnormal peptide link in the ring
- C07K 7/56 . . . the cyclisation not occurring through 2,4-diamino-butanoic acid
- C07K 7/58 Bacitracins; Related peptides
- C07K 7/60 . . . the cyclisation occurring through the 4-amino group of 2,4-diamino-butanoic acid
- C07K 7/62 Polymyxins; Related peptides
- C07K 7/64 . Cyclic peptides containing only normal peptide links
- C07K 7/645 . . { [Cyclosporins](#); Related peptides }
- C07K 7/66 . . Gramicidins S, C; Tyrocidins A,B,C; Related peptides

C07K 9/00**Peptides having up to 20 amino acids, containing saccharide radicals and having a fully defined sequence; Derivatives thereof**

- C07K 9/001 . { the peptide sequence having less than 12 amino acids and not being part of a ring structure }
- C07K 9/003 .. { Peptides being substituted by heterocyclic radicals, e.g. bleomycin, phleomycin }
- C07K 9/005 .. { containing within the molecule the substructure
with $m, n > 0$ and $m+n > 0$, A,B,D,E



being heteroatoms; X being a bond or a chain, e.g. muramylpeptides }

- C07K 9/006 . { the peptide sequence being part of a ring structure }
- C07K 9/008 .. { directly attached to a hetero atom of the saccharide radical, e.g. actaplanin, avoparcin, ristomycin, vancomycin }

C07K 11/00 **Depsipeptides having up to 20 amino acids in a fully defined sequence; Derivatives thereof**

- C07K 11/02 . cyclic, e.g. valinomycins { Derivatives thereof }

C07K 14/00 **Peptides having more than 20 amino acids; Gastrins; Somatostatins; Melanotropins; Derivatives thereof**

- C07K 14/001 . { by chemical synthesis }
- C07K 14/003 .. { Peptide-nucleic acids (PNAs) }
- C07K 14/005 . from viruses

NOTE

When classifying in this group, subject-matter related to viral proteins shall be classified by the symbol [C07K 14/005](#) together with (a number of) appropriate indexing codes out of M12N710-M12N795

WARNING

1. From March 15, 2012 groups [C07K 14/01](#) - [C07K 14/19](#) and subgroups thereof are no longer used for the classification of new documents. 2. Reclassification of the back-file follows the principle outlined in the Note here above

- C07K 14/01 .. DNA viruses
- C07K 14/015 ... Parvoviridae, e.g. feline panleukopenia virus, human parvovirus
- C07K 14/02 ... Hepadnaviridae, e.g. hepatitis B virus
- C07K 14/025 ... Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus
- C07K 14/03 ... Herpetoviridae, e.g. pseudorabies virus
- C07K 14/032 { Pseudorabies virus, i.e. Anjetzky virus }

| | | |
|--------------|-------|---|
| C07K 14/035 | .... | Herpes simplex virus I or II |
| C07K 14/04 | .... | Varicella-zoster virus |
| C07K 14/045 | ..... | Cytomegalovirus |
| C07K 14/05 | .... | Epstein-Barr virus |
| C07K 14/055 | .... | Marek`s disease virus |
| C07K 14/06 | .... | Infectious bovine rhinotracheitis virus |
| C07K 14/065 | ... | Poxviridae, e.g. avipoxvirus |
| C07K 14/07 | .... | Vaccinia virus; Variola virus |
| C07K 14/075 | ... | Adenoviridae |
| C07K 14/08 | .. | RNA viruses |
| C07K 14/082 | ... | { Arteriviridae, e.g. EAV, PRRSV } |
| C07K 14/085 | ... | Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus |
| C07K 14/09 | .... | Foot-and-mouth disease virus |
| C07K 14/095 | .... | Rhinovirus |
| C07K 14/10 | .... | Hepatitis A virus |
| C07K 14/105 | .... | Poliovirus |
| C07K 14/11 | ... | Orthomyxoviridae, e.g. influenza virus |
| C07K 14/115 | ... | Paramyxoviridae, e.g. parainfluenza virus |
| C07K 14/12 | .... | Mumps virus; Measles virus |
| C07K 14/125 | .... | Newcastle disease virus |
| C07K 14/13 | .... | Canine distemper virus |
| C07K 14/135 | .... | Respiratory syncytial virus |
| C07K 14/14 | ... | Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus |
| C07K 14/145 | ... | Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokda virus, vesicular stomatitis virus |
| C07K 14/15 | ... | Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus human T-cell leukaemia-lymphoma virus |
| C07K 14/155 | .... | Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV |
| C07K 14/16 | ..... | HIV-1; { HIV-2 } |
| C07K 14/161 | ..... | { gag-pol, e.g. p55, p24/25, p17/18, p7, p6, p66/68, p51/52, p31/34, p32, p40 } |
| C07K 14/162 | ..... | { env, e.g. gp160, gp110/120, gp41, V3, peptid T, CD4-Binding site } |
| C07K 14/163 | ..... | { Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx } |
| C07K 14/165 | ... | Coronaviridae, e.g. avian infectious bronchitis virus |
| C07K 14/17 | .... | Porcine transmissible gastroenteritis virus |
| C07K 14/175 | ... | Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus |
| C07K 14/18 | ... | Togaviridae; { Flaviviridae } |
| C07K 14/1808 | .... | { Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE, semliki forest virus (rubella virus C07K 14/19) } |
| C07K 14/1816 | .... | { Flaviviridae, e.g. pestivirus, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus (hog cholera virus), border disease virus } |

| | | |
|--------------|-------|--|
| C07K 14/1825 | ..... | { Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue } |
| C07K 14/1833 | ..... | { Hepatitis C; Hepatitis NANB } |
| C07K 14/1841 | ..... | { Hepatitis G; Hepatitis NANBNCNDNE } |
| C07K 14/19 | .... | Rubella virus |
| C07K 14/195 | . | from bacteria |

NOTE

In groups [C07K 14/20](#) to [C07K 14/365](#) , where appropriate, after the bacteria terminology, the indication of the order (O), family (F) or genus (G) of the bacteria is given in brackets.

| | | |
|--------------|-----|---|
| C07K 14/20 | .. | from Spirochaetales (O), e.g. Treponema, Leptospira |
| C07K 14/205 | .. | from Campylobacter (G) |
| C07K 14/21 | .. | from Pseudomonadaceae (F) |
| C07K 14/212 | ... | { Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella, Psychrobacter } |
| C07K 14/215 | .. | from Halobacteriaceae (F) |
| C07K 14/22 | .. | from Neisseriaceae (F) |
| C07K 14/225 | .. | from Alcaligenes (G) |
| C07K 14/23 | .. | from Brucella (G) |
| C07K 14/235 | .. | from Bordetella (G) |
| C07K 14/24 | .. | from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia |
| C07K 14/245 | ... | Escherichia (G) |
| C07K 14/25 | ... | Shigella (G) |
| C07K 14/255 | ... | Salmonella (G) |
| C07K 14/26 | ... | Klebsiella (G) |
| C07K 14/265 | ... | Enterobacter (G) |
| C07K 14/27 | ... | Erwinia (G) |
| C07K 14/275 | ... | Hafnia (G) |
| C07K 14/28 | .. | from Vibrionaceae (F) |
| C07K 14/285 | .. | from Pasteurellaceae (F), e.g. Haemophilus influenza |
| C07K 14/29 | .. | from Richettsiales (o) |
| C07K 14/295 | .. | from Chlamydiales (o) |
| C07K 14/30 | .. | from Mycoplasmatales, e.g. Pleuropneumonia-like organisms (PPLO) |
| C07K 14/305 | .. | from Micrococcaceae (F) |
| C07K 14/31 | ... | from Staphylococcus (G) |
| C07K 14/315 | .. | from Streptococcus (G), e.g. Enterococci |
| C07K 14/3153 | ... | { Streptokinase } |
| C07K 14/3156 | ... | { from Streptococcus pneumoniae (Pneumococcus) (Streptokinase C07K 14/3153) } |

| | | |
|---------------|-------|--|
| C07K 14/32 | .. | from Bacillus (G) |
| C07K 14/325 | ... | Bacillus thuringiensis crystal protein (delta-endotoxin) |
| C07K 14/33 | .. | from Clostridium (G) |
| C07K 14/335 | .. | from Lactobacillus (G) |
| C07K 14/34 | .. | from Corynebacterium (G) |
| C07K 14/345 | .. | from Brevibacterium (G) |
| C07K 14/35 | .. | from Mycobacteriaceae (F) |
| C07K 14/355 | .. | from Nocardia (G) |
| C07K 14/36 | .. | from Actinomyces; from Streptomyces (G) |
| C07K 14/365 | .. | from Actinoplanes (G) |
| C07K 14/37 | . | from fungi |
| C07K 14/375 | .. | from Basidiomycetes |
| C07K 14/38 | .. | from Aspergillus |
| C07K 14/385 | .. | from Penicillium |
| C07K 14/39 | .. | from yeasts |
| C07K 14/395 | ... | from Saccharomyces |
| C07K 14/40 | ... | from Candida |
| C07K 14/405 | . | from algae |
| C07K 14/41 | . | from lichens |
| C07K 14/415 | . | from plants |
| C07K 14/42 | .. | Lectins, e.g. concanavalin, phytohaemagglutinin |
| C07K 14/425 | .. | Zeins |
| C07K 14/43 | .. | { Sweetening agents, e.g. }thaumatin, { monellin } |
| C07K 14/435 | . | from animals; from humans |
| C07K 14/43504 | .. | { from invertebrates } |
| C07K 14/43509 | ... | { from crustaceans } |
| C07K 14/43513 | ... | { from arachnidae } |
| C07K 14/43518 | .... | { from spiders } |
| C07K 14/43522 | .... | { from scorpions } |
| C07K 14/43527 | .... | { from ticks } |
| C07K 14/43531 | .... | { from mites } |
| C07K 14/43536 | ... | { from worms } |
| C07K 14/4354 | .... | { from nematodes } |
| C07K 14/43545 | ..... | { from Caenorhabditis } |
| C07K 14/4355 | .... | { from cestodes } |
| C07K 14/43554 | ..... | { from Taenia } |
| C07K 14/43559 | .... | { from trematodes } |

| | | |
|---------------|-------|--|
| C07K 14/43563 | ... | { from insects } |
| C07K 14/43568 | .... | { from wasps } |
| C07K 14/43572 | .... | { from bees } |
| C07K 14/43577 | .... | { from flies } |
| C07K 14/43581 | ..... | { from Drosophila } |
| C07K 14/43586 | .... | { from silkworms } |
| C07K 14/4359 | .... | { from fleas } |
| C07K 14/43595 | ... | { from coelenteratae, e.g. medusae } |
| C07K 14/44 | .. | from protozoa |
| C07K 14/445 | ... | Plasmodium |
| C07K 14/45 | ... | Toxoplasma |
| C07K 14/455 | ... | Eimeria |
| C07K 14/46 | .. | from vertebrates |
| C07K 14/461 | ... | { from fish } |
| C07K 14/463 | ... | { from amphibians } |
| C07K 14/465 | ... | from birds |
| C07K 14/47 | ... | from mammals |
| C07K 14/4701 | .... | { not used } |
| C07K 14/4702 | ..... | { Regulators; Modulating activity } |
| C07K 14/4703 | ..... | { Inhibitors; Supressors } |
| C07K 14/4705 | ..... | { stimulating, promoting or activating activity } |
| C07K 14/4706 | ..... | { Guanosine triphosphatase activating protein, GAP } |
| C07K 14/4707 | .... | { Muscular dystrophy } |
| C07K 14/4708 | ..... | { Duchenne dystrophy } |
| C07K 14/471 | ..... | { Myotonic dystrophy } |
| C07K 14/4711 | .... | { Alzheimer`s disease; Amyloid plaque core protein } |
| C07K 14/4712 | .... | { Cystic fibrosis } |
| C07K 14/4713 | .... | { Autoimmune diseases, e.g. Insulin-dependent diabetes mellitus, multiple sclerosis, rheumathoid arthritis, systemic lupus erythematosus; Autoantigens } |
| C07K 14/4715 | ..... | { Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein } |
| C07K 14/4716 | ..... | { Muscle proteins, e.g. myosin, actin } |
| C07K 14/4717 | ..... | { Plasma globulins, lactoglobulin } |
| C07K 14/4718 | ..... | { Cytokine-induced proteins } |
| C07K 14/472 | ..... | { Complement proteins, e.g. anaphylatoxin, C3a, C5a } |
| C07K 14/4721 | ..... | { Lipocortins } |
| C07K 14/4722 | ..... | { G-proteins } |
| C07K 14/4723 | ..... | { Cationic antimicrobial peptides, e.g. defensins } |
| C07K 14/4725 | ..... | { Proteoglycans, e.g. aggrecan } |
| C07K 14/4726 | ..... | { Lectins } |

| | | |
|--------------|-------|---|
| C07K 14/4727 | ..... | { Mucins, e.g. human intestinal mucin } |
| C07K 14/4728 | ..... | { Calcium binding proteins, e.g. calmodulin } |
| C07K 14/473 | ..... | { alpha-Glycoproteins } |
| C07K 14/4731 | ..... | { Recognins, e.g. malignin } |
| C07K 14/4732 | ..... | { Casein (in foodstuffs A23J) } |
| C07K 14/4733 | ..... | { Acute pancreatitis-associated protein } |
| C07K 14/4735 | ..... | { Villin } |
| C07K 14/4736 | ..... | { Retinoblastoma protein } |
| C07K 14/4737 | ..... | { C-reactive protein } |
| C07K 14/4738 | ..... | { Cell cycle regulated proteins, e.g. cyclin, CDC, INK-CCR (cell cycle dependent kinases C12N 9/12) } |
| C07K 14/474 | ..... | { Pancreatic thread protein; Reg protein } |
| C07K 14/4741 | ..... | { Keratin; Cytokeratin } |
| C07K 14/4742 | ..... | { Bactericidal/Permeability-increasing protein (BPI) } |
| C07K 14/4743 | ..... | { Insulin-like growth factor binding protein } |
| C07K 14/4745 | ..... | { Cancer-associated SCM-recognition factor, CRISPP } |
| C07K 14/4746 | ..... | { p53 } |
| C07K 14/4747 | ..... | { Apoptosis related proteins } |
| C07K 14/4748 | ..... | { Tumour specific antigens; Tumour rejection antigen precursors (TRAP), e.g. MAGE } |
| C07K 14/475 | .. | Growth factors; Growth regulators |
| C07K 14/4753 | ... | { Hepatocyte growth factor; Scatter factor; Tumor cytotoxic factor II } |
| C07K 14/4756 | ... | { Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor } |
| C07K 14/48 | ... | Nerve growth factor (NGF) |
| C07K 14/485 | ... | Epidermal growth factor (EGF) (urogastrone) |
| C07K 14/49 | ... | Platelet-derived growth factor (PDGF) |
| C07K 14/495 | ... | Transforming growth factor (TGF) |
| C07K 14/50 | ... | Fibroblast growth factors (FGF) |
| C07K 14/501 | .... | { acidic FGF (aFGF) } |
| C07K 14/503 | .... | { basic FGF (bFGF) } |
| C07K 14/505 | ... | Erythropoietin (EPO) |
| C07K 14/51 | ... | Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor |
| C07K 14/515 | ... | Angiogenesis factors; Angiogenin |
| C07K 14/52 | .. | Cytokines; Lymphokines; Interferons |
| C07K 14/521 | ... | { Chemokines } |
| C07K 14/522 | .... | { Alpha-chemokines, e.g. NAP-2, ENA-78, GRO-alpha/MGSA/NAP-3, GRO-beta/MIP-2alpha, GRO-gamma/MIP-2beta, IP-10, GCP-2, MIG, PBSF, PF-4, KC } |
| C07K 14/523 | .... | { Beta-chemokines, e.g. RANTES, I-309/TCA-3, MIP-1alpha, MIP-1beta/ACT-2/LD78/SCIF, MCP-1/MCAF, MCP-2, MCP-3, LDCF-1, LDCF-2 } |

| | | |
|---------------|------|--|
| C07K 14/524 | ... | { Thrombopoietin, i.e. C-MPL ligand } |
| C07K 14/525 | ... | Tumor necrosis factor (TNF) |
| C07K 14/5255 | .... | { Lymphotoxin (LT) } |
| C07K 14/53 | ... | Colony-stimulating factor (CSF) |
| C07K 14/535 | .... | Granulocyte CSF; Granulocyte-macrophage CSF |
| C07K 14/54 | ... | Interleukins (IL) |
| C07K 14/5403 | .... | { IL-3 } |
| C07K 14/5406 | .... | { IL-4 } |
| C07K 14/5409 | .... | { IL-5 } |
| C07K 14/5412 | .... | { IL-6 } |
| C07K 14/5415 | .... | { Leukaemia inhibitory factor (LIF) } |
| C07K 14/5418 | .... | { IL-7 } |
| C07K 14/5421 | .... | { IL-8 } |
| C07K 14/5425 | .... | { IL-9 } |
| C07K 14/5428 | .... | { IL-10 } |
| C07K 14/5431 | .... | { IL-11 } |
| C07K 14/5434 | .... | { IL-12 } |
| C07K 14/5437 | .... | { IL-13 } |
| C07K 14/544 | .... | { IL-14 } |
| C07K 14/5443 | .... | { IL-15 } |
| C07K 14/5446 | .... | { IL-16 } |
| C07K 14/545 | .... | IL-1 |
| C07K 14/55 | .... | IL-2 |
| C07K 14/555 | ... | Interferons (IFN) |
| C07K 14/56 | .... | IFN-alpha |
| C07K 14/565 | .... | IFN-beta |
| C07K 14/57 | .... | IFN-gamma |
| C07K 14/575 | .. | Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin C07K 14/665 , e.g. corticotropin C07K 14/695) |
| C07K 14/57509 | ... | { Corticotropin releasing factor (CRF) (Urotensin) } |
| C07K 14/57518 | ... | { Placental lactogen; Chorionic somatomammotropin } |
| C07K 14/57527 | ... | { Calcitonin gene related peptide } |
| C07K 14/57536 | ... | { Endothelin, vasoactive intestinal contractor (VIC) } |
| C07K 14/57545 | ... | { Neuropeptide Y } |
| C07K 14/57554 | ... | { Prolactin } |
| C07K 14/57563 | ... | { Vasoactive intestinal peptide (VIP); Related peptides } |
| C07K 14/57572 | ... | { Gastrin releasing peptide (bombesin C07K 7/086) } |
| C07K 14/57581 | ... | { Thymosin; Related peptides } |
| C07K 14/5759 | ... | { Products of obesity genes, e.g. leptin, obese (OB), tub, fat } |

| | | |
|---------------|------|--|
| C07K 14/58 | ... | Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide (ANP); Cardionatrin; Cardiodilatin |
| C07K 14/582 | .... | { at least 1 amino acid in D-form } |
| C07K 14/585 | ... | Calcitonins |
| C07K 14/5855 | .... | { at least 1 amino acid in D-form } |
| C07K 14/59 | ... | Follicle-stimulating hormone (FSH); Chorionic gonadotropins, e.g. HCG; Luteinising hormone (LH); Thyroid-stimulating hormone (TSH) |
| C07K 14/592 | .... | { at least 1 amino acid in D-form } |
| C07K 14/595 | ... | Gastrins; Cholecystokinins (CCK) |
| C07K 14/5955 | .... | { at least 1 amino acid in D-form } |
| C07K 14/60 | ... | Growth-hormone releasing factors (GH-RF) (Somatoliberin) |
| C07K 14/605 | ... | Glucagons |
| C07K 14/61 | ... | Growth hormones (GH) (Somatotropin) |
| C07K 14/615 | .... | Extraction from natural sources |
| C07K 14/62 | ... | Insulins |
| C07K 14/622 | .... | { at least 1 amino acid in D-form } |
| C07K 14/625 | .... | extraction from natural sources |
| C07K 14/63 | ... | Motilins |
| C07K 14/635 | ... | Parathyroid hormone (parathormone); Parathyroid hormone-related peptides |
| C07K 14/64 | ... | Relaxins |
| C07K 14/645 | ... | Secretins |
| C07K 14/65 | ... | Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2 |
| C07K 14/655 | ... | Somatostatins |
| C07K 14/6555 | .... | { at least 1 amino acid in D-form } |
| C07K 14/66 | ... | Thymopoietins |
| C07K 14/662 | .... | { at least 1 amino acid in D-form } |
| C07K 14/665 | .. | derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin |
| C07K 14/67 | ... | Lipotropins, e.g. beta, gamma lipotropin |
| C07K 14/672 | .... | { with at least 1 amino acid in D-form } |
| C07K 14/675 | ... | beta-Endorphins |
| C07K 14/6755 | .... | { with at least 1 amino acid in D-form } |
| C07K 14/68 | ... | Melanocyte-stimulating hormone (MSH) |
| C07K 14/685 | .... | alpha-Melanotropin |
| C07K 14/69 | .... | beta-Melanotropin |
| C07K 14/695 | ... | Corticotropin (ACTH) |
| C07K 14/6955 | .... | { with at least 1 amino acid in D-form } |
| C07K 14/70 | ... | Enkephalins |
| C07K 14/702 | .... | { with at least 1 amino acid in D-form } |
| C07K 14/705 | .. | Receptors; Cell surface antigens; Cell surface determinants {(tumour specific antigens C07K 14/4748)} |
| C07K 14/70503 | ... | { Immunoglobulin superfamily } |

| | | |
|---------------|------|---|
| C07K 14/70507 | .... | { CD2 } |
| C07K 14/7051 | .... | { T-cell receptor (TcR)-CD3 complex } |
| C07K 14/70514 | .... | { CD4 } |
| C07K 14/70517 | .... | { CD8 } |
| C07K 14/70521 | .... | { CD28, CD152 } |
| C07K 14/70525 | .... | { ICAM molecules, e.g. CD50, CD54, CD102 } |
| C07K 14/70528 | .... | { CD58 } |
| C07K 14/70532 | .... | { B7 molecules, e.g. CD80, CD86 } |
| C07K 14/70535 | .... | { Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F) } |
| C07K 14/70539 | .... | { MHC-molecules, e.g. HLA-molecules } |
| C07K 14/70542 | .... | { CD106 } |
| C07K 14/70546 | ... | { Integrin superfamily } |
| C07K 14/7055 | .... | { Integrin beta1-subunit-containing molecules, e.g. CD29, CD49 } |
| C07K 14/70553 | .... | { Integrin beta2-subunit-containing molecules, e.g. CD11, CD18 } |
| C07K 14/70557 | .... | { Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61 } |
| C07K 14/7056 | ... | { Lectin superfamily, e.g. CD23, CD72 } |
| C07K 14/70564 | .... | { Selectins, e.g. CD62 } |
| C07K 14/70567 | ... | { Nuclear receptors, e.g. retinoic acid receptor (RAR), RXR, nuclear orphan receptors } |
| C07K 14/70571 | ... | { for neuromediators, e.g. serotonin receptor, dopamine receptor } |
| C07K 14/70575 | ... | { NGF/TNF-superfamily, e.g. CD70, CD95L, CD153, CD154 (NGF C07K 14/48 , TNF C07K 14/525)} |
| C07K 14/70578 | ... | { NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30, CD40, CD95 (NGF-receptor C07K 14/71 , TNF-receptor C07K 14/7151)} |
| C07K 14/70582 | ... | { CD71 } |
| C07K 14/70585 | ... | { CD44 } |
| C07K 14/70589 | ... | { CD45 } |
| C07K 14/70592 | ... | { CD52 } |
| C07K 14/70596 | ... | { Molecules with a "CD"-designation not provided for elsewhere } |
| C07K 14/71 | ... | for growth factors; for growth regulators |
| C07K 14/715 | ... | for cytokines; for lymphokines; for interferons |
| C07K 14/7151 | .... | { for tumor necrosis factor (TNF), for lymphotoxin (LT) } |
| C07K 14/7153 | .... | { for colony-stimulating factors (CSF) } |
| C07K 14/7155 | .... | { for interleukins (IL) } |
| C07K 14/7156 | .... | { for interferons (IFN) } |
| C07K 14/7158 | .... | { for chemokines } |
| C07K 14/72 | ... | for hormones ({ for neuromediators C07K 14/70571 }) |
| C07K 14/721 | .... | { Steroid/thyroid hormone superfamily, e.g. GR, EcR, androgen receptor, oestrogen receptor } |
| C07K 14/723 | .... | { G protein coupled receptor, e.g. TSHR-thyrotropin-receptor, LH/hCG receptor, FSH receptor } |

| | | |
|-------------------|-------|---|
| C07K 14/745 | .. | Blood coagulation or fibrinolysis factors |
| C07K 14/7455 | ... | { Thrombomodulin } |
| C07K 14/75 | ... | Fibrinogen |
| C07K 14/755 | ... | Factors VIII, { e.g. factor VIII C (AHF), factor VIII Ag (VWF) } |
| C07K 14/76 | .. | Albumins |
| C07K 14/765 | ... | Serum albumin, e.g. HSA |
| C07K 14/77 | ... | Ovalbumin |
| C07K 14/775 | .. | Apolipoproteins |
| C07K 14/78 | .. | Connective tissue peptides, e.g. collagen, elastin, laminin, fibronectin, vitronectin, cold insoluble globulin (CIG) |
| C07K 14/785 | .. | Alveolar surfactant peptides; Pulmonary surfactant peptides |
| C07K 14/79 | .. | Transferrins, e.g. lactoferrins, ovotransferrins |
| C07K 14/795 | . | Porphyrin- or corrin-ring-containing peptides |
| C07K 14/80 | .. | Cytochromes |
| C07K 14/805 | .. | Haemoglobins; Myoglobins |
| C07K 14/81 | . | Protease inhibitors |
| C07K 14/8103 | .. | { Exopeptidase (E.C. 3.4.11-19)inhibitors } |
| C07K 14/8107 | .. | { Endopeptidase (E.C. 3.4.21-99)inhibitors } |
| C07K 14/811 | ... | { Serine protease (E.C. 3.4.21)inhibitors } |
| C07K 14/8114 | .... | { Kunitz type inhibitors } |
| C07K 14/8117 | ..... | { Bovine/basic pancreatic trypsin inhibitor (BPTI, aprotinin) } |
| C07K 14/8121 | .... | { Serpins } |
| C07K 14/8125 | ..... | { Alpha-1-antitrypsin } |
| C07K 14/8128 | ..... | { Antithrombin III } |
| C07K 14/8132 | ..... | { Plasminogen activator inhibitors } |
| C07K 14/8135 | .... | { Kazal type inhibitors, e.g. pancreatic secretory inhibitor, ovomucoid } |
| C07K 14/8139 | ... | { Cysteine protease (E.C. 3.4.22)inhibitors, e.g. cystatin } |
| C07K 14/8142 | ... | { Aspartate protease (E.C. 3.4.23)inhibitors, e.g. HIV protease inhibitors } |
| C07K 14/8146 | ... | { Metalloprotease (E.C. 3.4.24)inhibitors, e.g. tissue inhibitor of metalloproteinase, TIMP } |
| C07K 14/815 | .. | from leeches, e.g. hirudin, eglin |
| C07K 14/82 | . | Translation products from oncogenes |
| C07K 14/825 | . | Metallothioneins |
| C07K 16/00 | | Immunoglobulins [IGs], e.g. monoclonal or polyclonal antibodies {(antibodies with enzymatic activity, e.g. abzymes C12N 9/0002)} |

NOTE

Documents characterised by the technical aspects of the construction of an antibody or fragment thereof, should be classified in [C07K 16/00](#) to [C07K 16/065](#) or [C07K 16/46](#) to **C07K 16/46D**

Documents not characterised by the technical aspects of the construction of an antibody or fragment thereof, should be classified only according to their specificity, where necessary accompanied by one or more appropriate indexing codes

- C07K 16/005 . { constructed by phage libraries }
- C07K 16/02 . from eggs
- C07K 16/04 . from milk
- C07K 16/06 . from serum
- C07K 16/065 .. { Purification, fragmentation }
- C07K 16/08 . against material from viruses
- C07K 16/081 .. { from DNA viruses }
- C07K 16/082 ... { Hepadnaviridae, e.g. hepatitis B virus }
- C07K 16/084 ... { Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus }
- C07K 16/085 ... { Herpetoviridae, e.g. pseudorabies virus, Epstein-Barr virus }
- C07K 16/087 { Herpes simplex virus }
- C07K 16/088 { Varicella-zoster virus, e.g. cytomegalovirus }
- C07K 16/10 .. from RNA viruses, { e.g. hepatitis E virus }
- C07K 16/1009 ... { Picornaviridae, e.g. hepatitis A virus }
- C07K 16/1018 ... { Orthomyxoviridae, e.g. influenza virus }
- C07K 16/1027 ... { Paramyxoviridae, e.g. respiratory syncytial virus }
- C07K 16/1036 ... { Retroviridae, e.g. leukemia viruses }
- C07K 16/1045 { Lentiviridae, e.g. HIV, FIV, SIV }
- C07K 16/1054 { gag-pol, e.g. p17, p24 }
- C07K 16/1063 { env, e.g. gp41, gp110/120, gp160, V3, PND, CD4 binding site }
- C07K 16/1072 { Regulatory proteins, e.g. tat, rev, vpt }
- C07K 16/1081 ... { Togaviridae, e.g. flavivirus, rubella virus, hog cholera virus }
- C07K 16/109 { Hepatitis C virus; Hepatitis G virus }
- C07K 16/12 . against material from bacteria
- C07K 16/1203 .. { from Gram-negative bacteria }
- C07K 16/1207 ... { from Spirochaetales (O), e.g. Treponema, Leptospira }
- C07K 16/121 ... { from Helicobacter (Campylobacter) (G) }
- C07K 16/1214 ... { from Pseudomonadaceae (F) }
- C07K 16/1217 ... { from Neisseriaceae (F), e.g. Acinetobacter }
- C07K 16/1221 ... { from Brucella (G) }

| | | |
|--------------|------|---|
| C07K 16/1225 | ... | { from Bordetella (G) } |
| C07K 16/1228 | ... | { from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia } |
| C07K 16/1232 | .... | { from Escherichia (G) } |
| C07K 16/1235 | .... | { from Salmonella (G) } |
| C07K 16/1239 | ... | { from Vibrionaceae (G) } |
| C07K 16/1242 | ... | { from Pasteurellaceae (F), e.g. Haemophilus influenza } |
| C07K 16/1246 | ... | { from Rickettsiales (O) } |
| C07K 16/125 | ... | { from Chlamydiales (O) } |
| C07K 16/1253 | ... | { from Mycoplasmatales, e.g. Pleuropneumonia-like organisms (PPLO) } |
| C07K 16/1257 | ... | { from Bacteridaceae (F) } |
| C07K 16/126 | ... | { from Legionella (G) } |
| C07K 16/1264 | ... | { from Rhizobiaceae (F) } |
| C07K 16/1267 | .. | { from Gram-positive bacteria } |
| C07K 16/1271 | ... | { from Micrococcaceae (F), e.g. Staphylococcus } |
| C07K 16/1275 | ... | { from Streptococcus (G) } |
| C07K 16/1278 | ... | { from Bacillus (G) } |
| C07K 16/1282 | ... | { from Clostridium (G) } |
| C07K 16/1285 | ... | { from Corynebacterium (G) } |
| C07K 16/1289 | ... | { from Mycobacteriaceae (F) } |
| C07K 16/1292 | ... | { from Actinomyces; from Streptomyces (G) } |
| C07K 16/1296 | ... | { from Listeria } |
| C07K 16/14 | . | against material from fungi, algae or lichens |
| C07K 16/16 | . | against material from plants |
| C07K 16/18 | . | against material from animals or humans |
| C07K 16/20 | .. | from protozoa |
| C07K 16/205 | ... | { Plasmodium } |
| C07K 16/22 | .. | against growth factors; { against growth regulators } |
| C07K 16/24 | .. | against cytokines, lymphokines or interferons |
| C07K 16/241 | ... | { Tumor Necrosis Factors } |
| C07K 16/242 | .... | { Lymphotoxin (LT) } |
| C07K 16/243 | ... | { Colony Stimulating Factors } |
| C07K 16/244 | ... | { Interleukins (IL) } |
| C07K 16/245 | .... | { IL-1 } |
| C07K 16/246 | .... | { IL-2 } |
| C07K 16/247 | .... | { IL-4 } |
| C07K 16/248 | .... | { IL-6 } |
| C07K 16/249 | ... | { Interferons } |

| | | |
|--------------|------|---|
| C07K 16/26 | .. | against hormones; { against hormone releasing or inhibiting factors } |
| C07K 16/28 | .. | against receptors, cell surface antigens or cell surface determinants |
| C07K 16/2803 | ... | { against the immunoglobulin superfamily } |
| C07K 16/2806 | .... | { against CD2 } |
| C07K 16/2809 | .... | { against the T-cell receptor (TcR)-CD3 complex } |
| C07K 16/2812 | .... | { against CD4 } |
| C07K 16/2815 | .... | { against CD8 } |
| C07K 16/2818 | .... | { against CD28 or CD152 } |
| C07K 16/2821 | .... | { against ICAM molecules, e.g. CD50, CD54, CD102 } |
| C07K 16/2824 | .... | { against CD58 } |
| C07K 16/2827 | .... | { against B7 molecules, e.g. CD80, CD86 } |
| C07K 16/283 | .... | { against Fc-receptors, e.g. CD16, CD32, CD64 (CD23 C07K 16/2851)} |
| C07K 16/2833 | .... | { against MHC-molecules, e.g. HLA-molecules } |
| C07K 16/2836 | .... | { against CD106 } |
| C07K 16/2839 | ... | { against the integrin superfamily } |
| C07K 16/2842 | .... | { against integrin beta1-subunit-containing molecules, e.g. CD29, CD49 } |
| C07K 16/2845 | .... | { against integrin beta2-subunit-containing molecules, e.g. CD11, CD18 } |
| C07K 16/2848 | .... | { against integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61 } |
| C07K 16/2851 | ... | { against the lectin superfamily, e.g. CD23, CD72 } |
| C07K 16/2854 | .... | { against selectins, e.g. CD62 } |
| C07K 16/2857 | ... | { against nuclear receptors, e.g. retinoic acid receptor (RAR), RXR, orphan receptor } |
| C07K 16/286 | ... | { against neuromediator receptors, e.g. serotonin receptor, dopamine receptor } |
| C07K 16/2863 | ... | { against receptors for growth factors, growth regulators } |
| C07K 16/2866 | ... | { against receptors for cytokines, lymphokines, interferons } |
| C07K 16/2869 | ... | { against hormone receptors (for antibodies against neuromediator receptors C07K 16/286)} |
| C07K 16/2872 | ... | { against prion molecules, e.g. CD230 } |
| C07K 16/2875 | ... | { against the NGF/TNF superfamily, e.g. CD70, CD95L, CD153, CD154 (against NGF C07K 16/22 , against TNF C07K 16/241)} |
| C07K 16/2878 | ... | { against the NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30, CD40, CD95 } |
| C07K 16/2881 | ... | { against CD71 } |
| C07K 16/2884 | ... | { against CD44 } |
| C07K 16/2887 | ... | { against CD20 } |
| C07K 16/289 | ... | { against CD45 } |
| C07K 16/2893 | ... | { against CD52 } |
| C07K 16/2896 | ... | { against molecules with a "CD"-designation, not provided for elsewhere } |
| C07K 16/30 | ... | from tumour cells |
| C07K 16/3007 | .... | { Carcino-embryonic Antigens } |

| | | |
|--------------|-------|---|
| C07K 16/3015 | .... | { Breast } |
| C07K 16/3023 | .... | { Lung } |
| C07K 16/303 | .... | { Liver or Pancreas } |
| C07K 16/3038 | .... | { Kidney, bladder } |
| C07K 16/3046 | .... | { Stomach, Intestines } |
| C07K 16/3053 | .... | { Skin, nerves, brain } |
| C07K 16/3061 | .... | { Blood cells } |
| C07K 16/3069 | .... | { Reproductive system, e.g. ovaria, uterus, testes, prostate } |
| C07K 16/3076 | .... | { against structure-related tumour-associated moieties } |
| C07K 16/3084 | ..... | { against tumour-associated gangliosides } |
| C07K 16/3092 | ..... | { against tumour-associated mucins } |
| C07K 16/32 | .. | against translation products of oncogenes |
| C07K 16/34 | .. | against blood group antigens |
| C07K 16/36 | .. | against blood coagulation factors |
| C07K 16/38 | . | against protease inhibitors of peptide structure |
| C07K 16/40 | . | against enzymes |
| C07K 16/42 | . | against immunoglobulins |
| C07K 16/4208 | .. | { against an idiotypic determinant on Ig } |
| C07K 16/4216 | ... | { against anti-viral Ig } |
| C07K 16/4225 | .... | { against anti-HIV Ig } |
| C07K 16/4233 | ... | { against anti-bacterial Ig } |
| C07K 16/4241 | ... | { against anti-human or anti-animal Ig } |
| C07K 16/425 | .... | { against anti-protozoal Ig } |
| C07K 16/4258 | .... | { against anti-receptor Ig } |
| C07K 16/4266 | ..... | { against anti-tumor receptor Ig } |
| C07K 16/4275 | ..... | { against anti-CD4 Ig } |
| C07K 16/4283 | .. | { against an allotypic or isotypic determinant on Ig } |
| C07K 16/4291 | ... | { against IgE } |
| C07K 16/44 | . | against material not provided for elsewhere, { e.g. haptens, metals, DNA, RNA, amino acids } |
| C07K 16/46 | . | Hybrid immunoglobulins (hybrids of an immunoglobulin with a peptide not being an immunoglobulin C07K 19/00) |
| C07K 16/461 | .. | { Igs containing Ig-regions, -domains or -residues from different species } |
| C07K 16/462 | ... | { Igs containing a variable region (Fv) from one specie and a constant region (Fc) from another } |
| C07K 16/464 | ... | { Igs containing CDR-residues from one specie grafted between FR-residues from another } |
| C07K 16/465 | .... | { with additional modified FR-residues } |

- C07K 16/467 . . . { Igs with modifications in the FR-residues only }
- C07K 16/468 . . { Immunoglobulins having two or more different antigen binding sites, e.g. multifunctional antibodies }

C07K 17/00 **Carrier-bound or immobilised peptides (carrier-bound or immobilised enzymes C12N 11/00); Preparation thereof**

- C07K 17/02 . Peptides being immobilised on, or in, an organic carrier
- C07K 17/04 . . entrapped within the carrier, e.g. gel, hollow fibre
- C07K 17/06 . . attached to the carrier via a bridging agent
- C07K 17/08 . . the carrier being a synthetic polymer
- C07K 17/10 . . the carrier being a carbohydrate
- C07K 17/12 . . . Cellulose or derivatives thereof
- C07K 17/14 . Peptides being immobilised on, or in, an inorganic carrier

C07K 19/00 **Hybrid peptides**

C07K 2299/00 **Coordinates from 3D structures of peptides, e.g. proteins or enzymes**

C07K 2316/00 **Immunoglobulins specific feautres**

- C07K 2316/50 . Immunoglobulins characterised by their fragments
- C07K 2316/52 . . Constant or Fc region
- C07K 2316/95 . Antibodies with agonistic, e.g. apoptotic, activity upon their specific binding to an antigen
- C07K 2316/96 . Antibodies with antagonisticactivity upon their specific binding to an antigen

C07K 2317/00 **Immunoglobulins specific feautres**

- C07K 2317/10 . characterized by their source of isolation or production
- C07K 2317/11 . . isolated from eggs
- C07K 2317/12 . . isolated from milk
- C07K 2317/13 . . isolated from plants
- C07K 2317/14 . . Specific host cells or culture conditions, e.g. components, pH or temperature
- C07K 2317/20 . characterized by taxonomic origin
- C07K 2317/21 . . from primates, e.g. man
- C07K 2317/22 . . from camelids, e.g. camel, llama or dromedary
- C07K 2317/23 . . from birds

- C07K 2317/24 .. containing regions, domains or residues from different species, e.g. chimeric, humanized or veneered

- C07K 2317/30 . characterized by aspects of specificity or valency
- C07K 2317/31 .. multispecific
- C07K 2317/32 .. specific for a neo-epitope on a complex, e.g. antibody-antigen or ligand-receptor
- C07K 2317/33 .. Crossreactivity, e.g. for species or epitope, or lack of said crossreactivity
- C07K 2317/34 .. Identification of a linear epitope shorter than 20 amino acid residues or of a conformational epitope defined by amino acid residues

- C07K 2317/35 .. Valency

- C07K 2317/40 . characterized by post-translational modification
- C07K 2317/41 .. Glycosylation, sialylation, or fucosylation

- C07K 2317/50 . characterized by immunoglobulin fragments
- C07K 2317/51 .. Complete heavy chain or Fd fragment, i.e. VH + CH1
- C07K 2317/515 .. Complete light chain, i.e. VL + CL
- C07K 2317/52 .. Constant or Fc region; Isotype
- C07K 2317/522 ... CH1 domain
- C07K 2317/524 ... CH2 domain
- C07K 2317/526 ... CH3 domain
- C07K 2317/528 ... CH4 domain
- C07K 2317/53 ... Hinge
- C07K 2317/54 .. F(ab')₂
- C07K 2317/55 .. Fab or Fab'
- C07K 2317/56 .. variable (Fv) region , i.e. VH and/or VL
- C07K 2317/565 ... Complementarity determining region (CDR)
- C07K 2317/567 ... Framework region (FR)
- C07K 2317/569 ... Single domain, e.g. dAb, sdAb, VHH, VNAR or nanobody®

- C07K 2317/60 . characterized by non-natural combinations of immunoglobulin fragments
- C07K 2317/62 .. comprising only variable region components
- C07K 2317/622 ... Single chain antibody (scFv)
- C07K 2317/624 ... Disulfide-stabilized antibody (dsFv)
- C07K 2317/626 ... Diabody or triabody
- C07K 2317/64 .. comprising a combination of variable region and constant region components
- C07K 2317/66 .. comprising a swap of domains, e.g. CH3-CH2, VH-CL or VL-CH1

- C07K 2317/70 . characterized by effect upon binding to a cell or to an antigen
- C07K 2317/71 .. Decreased effector function due to an Fc-modification
- C07K 2317/72 .. Increased effector function due to an Fc-modification
- C07K 2317/73 .. Inducing cell death, e.g. apoptosis, necrosis or inhibition of cell proliferation

| | | |
|---------------------|-----|---|
| C07K 2317/732 | ... | Antibody-dependent cellular cytotoxicity (ADCC) |
| C07K 2317/734 | ... | Complement-dependent cytotoxicity (CDC) |
| C07K 2317/74 | .. | Inducing cell proliferation |
| C07K 2317/75 | .. | Agonist effect on antigen |
| C07K 2317/76 | .. | Antagonist effect on antigen, e.g. neutralization or inhibition of binding |
| C07K 2317/77 | .. | Internalization into the cell |
| C07K 2317/80 | . | remaining in the (producing) cell, i.e. intracellular antibodies or intrabodies |
| C07K 2317/81 | .. | functional in the endoplasmatic reticulum (ER) or the Golgi apparatus |
| C07K 2317/82 | .. | functional in the cytoplasm, the inner aspect of the cell membrane, the nucleus or the mitochondria |
| C07K 2317/90 | . | characterized by (pharmaco)kinetic aspects or by stability of the immunoglobulin |
| C07K 2317/92 | .. | Affinity (KD), association rate (Ka), dissociation rate (Kd) or EC50 value |
| C07K 2317/94 | .. | Stability, e.g. half-life, pH, temperature or enzyme-resistance |
| C07K 2318/00 | | Antibody mimetics or scaffolds |
| C07K 2318/10 | . | Immunoglobulin or domain(s) thereof as scaffolds for inserted non-Ig peptide sequences, e.g. for vaccination purposes |
| C07K 2318/20 | . | Antigen-binding scaffold molecules wherein the scaffold is not an immunoglobulin variable region or antibody mimetics |
| C07K 2319/00 | | Fusion polypeptide |
| C07K 2319/003 | . | containing an enzyme part without its signal sequence |
| C07K 2319/006 | .. | containing an enzyme signal sequence possibly accompanied by part or the whole of the mature enzyme |
| C07K 2319/01 | . | containing a localisation/targetting motif |
| C07K 2319/02 | .. | containing a signal sequence |
| C07K 2319/03 | .. | containing a transmembrane segment |
| C07K 2319/033 | .. | containing a motif for targeting to the internal surface of the plasma membrane, e.g. containing a myristoylation motif |
| C07K 2319/034 | .. | containing a motif for targeting to the periplasmic space of Gram negative bacteria as a soluble protein, i.e. signal sequence should be cleaved |
| C07K 2319/035 | .. | containing a signal for targeting to the external surface of a cell, e.g. to the outer membrane of Gram negative bacteria, GPI- anchored eukaryote proteins |
| C07K 2319/036 | .. | targeting to the medium outside of the cell, e.g. type III secretion |
| C07K 2319/04 | .. | containing an ER retention signal such as a C-terminal HDEL motif |
| C07K 2319/05 | .. | containing a GOLGI retention signal |
| C07K 2319/055 | .. | containing a signal for localisation to secretory granules (for exocytosis) |
| C07K 2319/06 | .. | containing a lysosomal/endosomal localisation signal |

| | |
|---------------|---|
| C07K 2319/07 | .. containing a mitochondrial localisation signal |
| C07K 2319/08 | .. containing a chloroplast localisation signal |
| C07K 2319/09 | .. containing a nuclear localisation signal |
| C07K 2319/095 | .. containing a nuclear export signal |
| C07K 2319/10 | .. containing a tag for extracellular membrane crossing, e.g. TAT or VP22 |
| C07K 2319/20 | . containing a tag with affinity for a non-protein ligand |
| C07K 2319/21 | .. containing a His-tag |
| C07K 2319/22 | .. containing a Strep-tag |
| C07K 2319/23 | .. containing a GST-tag |
| C07K 2319/24 | .. containing a MBP (maltose binding protein)-tag |
| C07K 2319/30 | . Non-immunoglobulin-derived peptide or protein having an immunoglobulin constant or Fc region, or a fragment thereof, attached thereto |
| C07K 2319/31 | . fusions, other than Fc, for prolonged plasma life, e.g. albumin |
| C07K 2319/32 | . fusions with soluble part of a cell surface receptor, "decoy receptors" |
| C07K 2319/33 | . fusions for targeting to specific cell types, e.g. tissue specific targeting, targeting of a bacterial subspecies |
| C07K 2319/35 | . containing a fusion for enhanced stability/folding during expression, e.g. fusions with chaperones or thioredoxin |
| C07K 2319/40 | . containing a tag for immunodetection, or an epitope for immunisation |
| C07K 2319/41 | .. containing a Myc-tag |
| C07K 2319/42 | .. containing a HA(hemagglutinin)-tag |
| C07K 2319/43 | .. containing a FLAG-tag |
| C07K 2319/50 | . containing protease site |
| C07K 2319/55 | . containing a fusion with a toxin, e.g. diphtheria toxin |
| C07K 2319/60 | . containing spectroscopic/fluorescent detection, e.g. green fluorescent protein (GFP) |
| C07K 2319/61 | . containing an enzyme fusion for detection (lacZ, luciferase) |
| C07K 2319/70 | . containing domain for protein-protein interaction |
| C07K 2319/705 | .. containing a protein-A fusion |
| C07K 2319/71 | .. containing domain for transcriptional activation, e.g. VP16 |
| C07K 2319/715 | ... containing a domain for ligand dependent transcriptional activation, e.g. containing a steroid receptor domain |
| C07K 2319/72 | .. containing SH2 domain |
| C07K 2319/73 | .. containing coiled-coiled motif (leucine zippers) |

- C07K 2319/735 . . containing a domain for self-assembly, e.g. a viral coat protein ([includes phage display](#))
- C07K 2319/74 . . containing a fusion for binding to a cell surface receptor
- C07K 2319/75 . . . containing a fusion for activation of a cell surface receptor, e.g. thrombopoietin, NPY and other peptide hormones
- C07K 2319/80 . containing a DNA binding domain, e.g. LacI or Tet-repressor
- C07K 2319/81 . . containing a Zn-finger domain for DNA binding
- C07K 2319/85 . containing an RNA binding domain
- C07K 2319/90 . containing a motif for post-translational modification
- C07K 2319/91 . . containing a motif for glycosylation
- C07K 2319/912 . . . containing a GPI ([phosphatidyl-inositol glycane](#)) anchor
- C07K 2319/915 . . containing a motif for acylation
- C07K 2319/92 . . containing an intein (["protein splicing"](#)) domain
- C07K 2319/95 . containing a motif/fusion for degradation ([ubiquitin fusions, PEST sequence](#))