

**ECLA****EUROPEAN 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 [C07D519/02](#); 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 [C08G69/00](#); macromolecular products derived from proteins [C08H1/00](#); preparation of glue or gelatine C09H; single cell proteins, enzymes C12N; genetic engineering processes for obtaining peptides [C12N15/00](#); compositions for measuring or testing processes involving enzymes C12Q; investigation or analysis of biological material [G01N33/00](#))

[N: **WARNING** [C2010.10]

- The following IPC groups are not used in the internal ECLA classification scheme. Subject matter covered by these groups is classified in the following ECLA groups:

<a href="#">C07K5/023</a>	covered by	<a href="#">C07K5/02A</a>
<a href="#">C07K5/027</a>	covered by	<a href="#">C07K5/02B</a>
<a href="#">C07K5/03</a>	covered by	<a href="#">C07K5/02C</a>
<a href="#">C07K5/033</a>	covered by	<a href="#">C07K5/02D</a>
<a href="#">C07K5/037</a>	covered by	<a href="#">C07K5/02F</a>
<a href="#">C07K5/062</a>	covered by	<a href="#">C07K5/06A1</a>
<a href="#">C07K5/065</a>	covered by	<a href="#">C07K5/06A2</a>
<a href="#">C07K5/068</a>	covered by	<a href="#">C07K5/06B</a>
<a href="#">C07K5/072</a>	covered by	<a href="#">C07K5/06C</a>
<a href="#">C07K5/075</a>	covered by	<a href="#">C07K5/06C1A1</a>
<a href="#">C07K5/078</a>	covered by	<a href="#">C07K5/06H</a>
<a href="#">C07K5/083</a>	covered by	<a href="#">C07K5/08A1</a>
<a href="#">C07K5/087</a>	covered by	<a href="#">C07K5/08A2</a>
<a href="#">C07K5/09</a>	covered by	<a href="#">C07K5/08B</a>
<a href="#">C07K5/093</a>	covered by	<a href="#">C07K5/08C</a>
<a href="#">C07K5/097</a>	covered by	<a href="#">C07K5/08H</a>
<a href="#">C07K5/103</a>	covered by	<a href="#">C07K5/10A1</a>
<a href="#">C07K5/107</a>	covered by	<a href="#">C07K5/10A2</a>
<a href="#">C07K5/11</a>	covered by	<a href="#">C07K5/10B</a>
<a href="#">C07K5/113</a>	covered by	<a href="#">C07K5/10C</a>
<a href="#">C07K5/117</a>	covered by	<a href="#">C07K5/10H</a>
<a href="#">C07K14/185</a>	covered by	<a href="#">C07K14/18F</a>
<a href="#">C07K14/725</a>	covered by	<a href="#">C07K14/705</a>
<a href="#">C07K14/73</a>	covered by	<a href="#">C07K14/705B14</a>
<a href="#">C07K14/735</a>	covered by	<a href="#">C07K14/705B26</a>
<a href="#">C07K14/74</a>	covered by	<a href="#">C07K14/705B28</a>

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**Notes**

[C0408]

- 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 a mercapto group of an 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-OCH<sub>2</sub>CO<sub>2</sub>H and Gly-OCH<sub>2</sub>CO-Ala-Gly are considered as "linear depsipeptides", but HOCH<sub>2</sub>CO-Gly-Ala-Gly does not contain an ester link, and is thus a derivative of Gly-Ala-Gly which is covered by [C07K5/08](#);
  - 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-OCH<sub>2</sub>CO.

2. 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 [C07K5/00](#).
3. Peptides prepared by chemical processes and having an amino acid sequence

derived from naturally occurring peptides are classified with the natural one.

4. 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.
5. When classifying in this subclass, classification is also made in group [B01D15/08](#) insofar as subject matter of general interest relating to chromatography is concerned.

## C07K1/00

**General methods for the preparation of peptides [N: i.e. processes for the organic chemical preparation of peptides or proteins of any length] [N1205]**

- C07K1/00A . [N: by transforming the C-terminal amino acid to amides] [N1205]
- C07K1/00B . [N: of peptides containing derivatised side chain amino acids]
- C07K1/02 . in solution [N: ([C07K1/00A](#), [C07K1/00B](#) take precedence)]
- C07K1/02A . . [N: using racemisation inhibiting agents]
- C07K1/02B . . [N: by fragment condensation in solution] [N1205]
- C07K1/04 . on carriers [N: ([C07K1/00A](#), [C07K1/00B](#) take precedence)]
- C07K1/04A . . [N: characterised by the nature of the carrier]
- C07K1/04B . . [N: using devices to improve synthesis, e.g. reactors, special vessels]
- C07K1/04C . . [N: Simultaneous synthesis of different peptide species; Peptide libraries] [N9501]
- C07K1/06 . using protecting groups or activating agents [N: ([C07K1/00A](#), [C07K1/00B](#) take precedence)]
- C07K1/06A . . [N: using protecting groups]
- C07K1/06A1 . . . [N: for alpha- or omega-carboxy functions]
- C07K1/06A2 . . . [N: for alpha-amino functions]
- C07K1/06A3 . . . [N: for omega-amino or -guanidino functions]
- C07K1/06A4 . . . [N: for hydroxy functions, not being part of carboxy functions]
- C07K1/06A5 . . . [N: for omega-amido functions]
- C07K1/06A6 . . . [N: for sulfur-containing functions]
- C07K1/06A7 . . . [N: for heterocyclic side chains]
- C07K1/08 . . using activating agents [N: ([C07K1/00A](#), [C07K1/00B](#) take precedence)]
- C07K1/08A . . . [N: containing phosphorus]
- C07K1/08B . . . [N: containing nitrogen]
- C07K1/08C . . . [N: containing sulfur]
- C07K1/08D . . . [N: containing other elements, e.g. B, Si, As]
- C07K1/10 . using coupling agents [N: ([C07K1/00B](#) takes precedence)]
- C07K1/107 . by chemical modification of precursor peptides

- C07K1/107D . . [N: by covalent attachment of residues or functional groups]
- C07K1/107D2 . . . [N: by covalent attachment of amino acids or peptide residues]
- C07K1/107D4 . . . [N: by covalent attachment of residues other than amino acids or peptide residues, e.g. sugars, polyols, fatty acids]
- C07K1/113 . . without change of the primary structure
- C07K1/113B . . . [N: by redox-reactions involving cystein/cystin side chains] [N1205]
- C07K1/113D . . . [N: by reversible modification of the secondary, tertiary or quarternary structure, e.g. using denaturing or stabilising agents] [N1205]
  
- C07K1/12 . . by hydrolysis [N: i.e. solvolysis in general]
- C07K1/12A . . [N: Hydrolysis with acids different from HF]
- C07K1/12C . . [N: Hydrazinolysis]
- C07K1/12D . . [N: Aminolysis]
- C07K1/12E . . [N: sequencing] [N1205]
  
- C07K1/13 . . Labelling of peptides
  
- C07K1/14 . . Extraction; Separation; Purification
- C07K1/14A . . . [N: by extraction or solubilisation] [N1205]
- C07K1/16 . . by chromatography
- C07K1/16A . . . [N: mixed-mode chromatography] [N1205]
- C07K1/18 . . . Ion-exchange chromatography
- C07K1/20 . . . Partition-, reverse-phase or hydrophobic interaction chromatography
- C07K1/22 . . . Affinity chromatography or related techniques based upon selective absorption processes
  
- C07K1/24 . . by electrochemical means
- C07K1/26 . . . Electrophoresis
- C07K1/28 . . . . Isoelectric focusing
- C07K1/28A . . . . . [N: multi dimensional electrophoresis] [N1205]
- C07K1/30 . . by precipitation
- C07K1/30A . . . [N: by salting out] [N1205]
- C07K1/30B . . . [N: by crystallization] [N1205]

[N: **Notes**

Large single crystals of proteins from solutions are classified in [C30B7/00](#) for the method and in [C30B29/58](#) for the crystal [N1208]

- C07K1/32 . . . as complexes
- C07K1/34 . . by filtration, ultrafiltration or reverse osmosis
- C07K1/36 . . by a combination of two or more processes of different types

**C07K2/00 Peptides of undefined number of amino acids; Derivatives thereof**

**C07K4/00 Peptides having up to 20 amino acids in an undefined or only partially defined sequence; Derivatives thereof**

- C07K4/02 . from viruses
- C07K4/04 . from bacteria
- C07K4/06 . from fungi
- C07K4/08 . from algae; from lichens
- C07K4/10 . from plants
- C07K4/12 . from animals; from humans

**[N: Note**

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

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**C07K5/00 Peptides containing up to four amino acids in a fully defined sequence; Derivatives thereof**

- C07K5/02 . containing at least one abnormal peptide link
- C07K5/02A . . [N: containing the structure -NH-X-X-C(=O)-, X being an optionally substituted carbon atom or a heteroatom, e.g. beta-amino acids]
- C07K5/02B . . [N: containing the structure -NH-(X)3-C(=O)-, e.g. statine or derivatives thereof]
- C07K5/02C . . [N: containing the structure -NH-(X)4-C(=O), e.g. `isosters`, replacing two amino acids]
- C07K5/02D . . [N: containing the structure -NH-(X)n-C(=O)-, n being 5 or 6; for n > 6, classification in [C07K5/06](#) to [C07K5/10](#), according to the moiety having normal peptide bonds]
- C07K5/02E . . [N: containing the structure -N-C-N-C(=O)-, e.g. retro-inverso peptides]
- C07K5/02F . . [N: containing natural amino acids, forming a peptide bond via their side chain functional group, e.g. epsilon-Lys, gamma-Glu]
- C07K5/02G . . [N: containing the structure -C(=O)-C-N-C(=O)-N-C-C(=O)-]
- C07K5/02H . . [N: containing the structure -X-C(=O)-(C)n-N-C-C(=O)-Y-; X and Y being heteroatoms; n being 1 or 2]
- C07K5/02H1 . . . [N: with the first amino acid being heterocyclic, e.g. Pro, Trp] [N1205]
- C07K5/02J . . [N: containing the structure -N-C-C(=O)-N-C(=O)-C-N-]
- C07K5/02L . . [N: containing the (partial) peptide sequence -Phe-His-NH-(X)2-C(=O)-, e.g. Renin-inhibitors with n = 2 - 6; for n > 6 see [C07K5/06](#) to [C07K5/10](#)]
- C07K5/04 . containing only normal peptide links

**[N: Note**

In groups [C07K5/06](#) to [C07K5/10](#) 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(NH<sub>2</sub>)CO<sub>2</sub>H  
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- C07K5/06 . . Dipeptides
- C07K5/06A . . . [N: with the first amino acid being neutral]
- C07K5/06A1 . . . . [N: and aliphatic] [N1205]
- C07K5/06A1A . . . . . [N: the side chain containing 0 or 1 carbon atom, i.e. Gly or Ala]
- C07K5/06A1B . . . . . [N: the side chain containing 2 to 4 carbon atoms]
- C07K5/06A1B1 . . . . . [N: Leu-amino acid]
- C07K5/06A1B2 . . . . . [N: Val-amino acid]
- C07K5/06A1F . . . . . [N: the side chain containing heteroatoms not provided for by [C07K5/06B](#) to [C07K5/06H](#), e.g. Ser, Met, Cys, Thr]
- C07K5/06A1F1 . . . . . [N: Ser-amino acid]
- C07K5/06A2 . . . . [N: and aromatic or cycloaliphatic] [N1205]
- C07K5/06B . . . [N: with the first amino acid being basic]
- C07K5/06B1 . . . . [N: Arg-amino acid]
- C07K5/06C . . . [N: with the first amino acid being acidic]
- C07K5/06C1 . . . . [N: Asp- or Asn-amino acid]
- C07K5/06C1A . . . . . [N: the second amino acid being aromatic or cycloaliphatic]
- C07K5/06C1A1 . . . . . [N: Aspartame]
- C07K5/06H . . . [N: with the first amino acid being heterocyclic]
- C07K5/06H3 . . . . [N: and His-amino acid; Derivatives thereof] [N1205]
- C07K5/06H5 . . . . [N: and Trp-amino acid; Derivatives thereof ] [N1205]
- C07K5/06H6 . . . . [N: and Pro-amino acid; Derivatives thereof] [N1205]
- C07K5/06H7 . . . . [N: and Glp-amino acid; Derivatives thereof] [N1205]
- C07K5/06H8 . . . . [N: and Pristinamycin II; Derivatives thereof] [N1205]
- C07K5/06T . . . [N: containing heteroatoms different from O, S, or N ] [N1205]
- C07K5/08 . . Tripeptides
- C07K5/08A . . . [N: with the first amino acid being neutral]
- C07K5/08A1 . . . . [N: and aliphatic]
- C07K5/08A1A . . . . . [N: the side chain containing 0 or 1 carbon atoms, i.e. Gly, Ala] [M1208]
- C07K5/08A1B . . . . . [N: the side chain containing 2 to 4 carbon atoms, e.g. Val, Ile, Leu]
- C07K5/08A1F . . . . . [N: the side chain containing O or S as heteroatoms, e.g. Cys, Ser]
- C07K5/08A2 . . . . [N: and aromatic or cycloaliphatic]
- C07K5/08B . . . [N: with the first amino acid being basic]
- C07K5/08B1 . . . . [N: the first amino acid being Arg]

- C07K5/08C . . . [N: with the first amino acid being acidic]
- C07K5/08H . . . [N: with the first amino acid being heterocyclic, e.g. His, Pro, Trp] [N1205]
- C07K5/08H4 . . . . [N: and Pro-amino acid; Derivatives thereof] [N1205]
- C07K5/08H5 . . . . [N: and Glp-amino acid; Derivatives thereof] [N1205]
- C07K5/08T . . . [N: containing heteroatoms different from O, S, or N ] [N1205]
- C07K5/10 . . Tetrapeptides
- C07K5/10A . . . [N: with the first amino acid being neutral]
- C07K5/10A1 . . . . [N: and aliphatic]
- C07K5/10A1A . . . . . [N: the side chain containing 0 or 1 carbon atoms, i.e. Gly, Ala]
- C07K5/10A1B . . . . . [N: the side chain containing 2 to 4 carbon atoms, e.g. Val, Ile, Leu]
- C07K5/10A1F . . . . . [N: the side chain containing O or S as heteroatoms, e.g. Cys, Ser]
- C07K5/10A2 . . . . [N: and aromatic or cycloaliphatic]
- C07K5/10B . . . [N: with the first amino acid being basic]
- C07K5/10C . . . [N: with the first amino acid being acidic]
- C07K5/10H . . . [N: with the first amino acid being heterocyclic]
- C07K5/10T . . . [N: containing heteroatoms different from O, S, or N ] [N1205]
- C07K5/12 . . Cyclic peptides [N: with only normal peptide bonds in the ring] [N1205]

[N: **Notes**

Cyclic peptides containing at least one abnormal peptide link are classified as linear peptides [N1208]

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- C07K5/12A . . . [N: Tripeptides]
- C07K5/12B . . . [N: Tetrapeptides]

**C07K7/00 Peptides having 5 to 20 amino acids in a fully defined sequence; Derivatives thereof**

[N: **Note**

In this subgroup cyclic compounds related to specific compounds which are classified in a specific group, e.g. [C07K7/06D](#), are classified in this specific group only

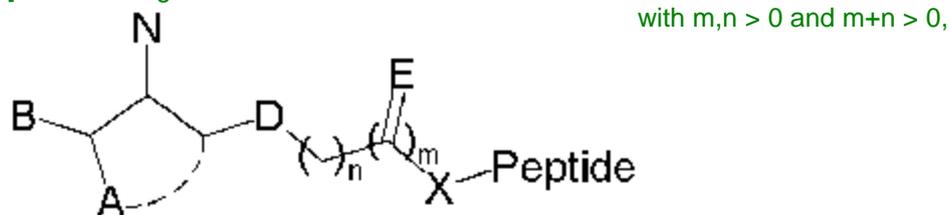
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- C07K7/02 . Linear peptides containing at least one abnormal peptide link
- C07K7/04 . Linear peptides containing only normal peptide links
- C07K7/06 . . having 5 to 11 amino acids
- C07K7/06D . . . [N: Serum thymic factor]
- C07K7/06E . . . [N: Thymic humoral factor]
- C07K7/06F . . . [N: Hemoregulatory peptides based on sequence Glp-Glu-Asp-Cys-Lys] [N0109]
- C07K7/08 . . having 12 to 20 amino acids ([gastrins C07K14/595](#); [somatostatins C07K14/655](#); [melanotropins C07K14/68](#))
- C07K7/08C . . . [N: Neurotensin]
- C07K7/08D . . . [N: Bombesin; Related peptides (having more than 20 amino acids [C07K14/575M](#))]
- C07K7/14 . . Angiotensins: Related peptides

- C07K7/16 . . . Oxytocins; Vasopressins; Related peptides
- C07K7/18 . . . Kallidins; Bradykinins; Related peptides
- C07K7/22 . . . [N: Tachykinins, e.g.] Eledoisins, [N: Substance P]; Related peptides
- C07K7/23 . . . Luteinising hormone-releasing hormone (LHRH); Related peptides
- C07K7/28 . . . Gramicidins A, B, D; Related peptides
  
- C07K7/50 . . . Cyclic peptides containing at least one abnormal peptide link
- C07K7/52 . . . . with only normal peptide links in the ring
- C07K7/54 . . . . with at least one abnormal peptide link in the ring
- C07K7/56 . . . . . the cyclisation not occurring through 2,4-diamino-butanoic acid
- C07K7/58 . . . . . Bacitracins; Related peptides
- C07K7/60 . . . . . the cyclisation occurring through the 4-amino group of 2,4-diamino-butanoic acid
- C07K7/62 . . . . . Polymyxins; Related peptides
  
- C07K7/64 . . . Cyclic peptides containing only normal peptide links
- C07K7/64A . . . . [N: Cyclosporins; Related peptides]
- C07K7/66 . . . . Gramicidins S, C; Tyrocidins A,B,C; Related peptides

**C07K9/00 Peptides having up to 20 amino acids, containing saccharide radicals and having a fully defined sequence; Derivatives thereof**

- C07K9/00D . . . [N: the peptide sequence having less than 12 amino acids and not being part of a ring structure]
- C07K9/00D2 . . . . [N: Peptides being substituted by heterocyclic radicals, e.g. bleomycin, phleomycin]
- C07K9/00D4 . . . . [N: containing within the molecule the substructure



A,B,D,E being heteroatoms; X being a bond or a chain, e.g. muramylpeptides]

- C07K9/00F . . . [N: the peptide sequence being part of a ring structure]
- C07K9/00F2 . . . . [N: directly attached to a hetero atom of the saccharide radical, e.g. actaplanin, avoparcin, ristomycin, vancomycin]

**C07K11/00 Depsipeptides having up to 20 amino acids in a fully defined sequence; Derivatives thereof**

- C07K11/02 . . . cyclic, e.g. valinomycins [N: Derivatives thereof]

**C07K14/00 Peptides having more than 20 amino acids; Gastrins; Somatostatins; Melanotropins; Derivatives thereof**

- C07K14/00B . . . [N: by chemical synthesis]

- C07K14/00B1 . . [N: Peptide-nucleic acids (PNAs)] [N9511]
- C07K14/005 . from viruses
  - [N: **WARNING**
  - [N1204]1. From March 15, 2012 groups [C07K14/01-C07K14/19](#) 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
  - ]
  - [N: **Notes**
  - [N1204] When classifying in this group, subject-matter related to viral proteins shall be classified by the symbol [C07K14/005](#) together with (a number of) appropriate indexing codes out of M12N710-M12N795
  - ]
- C07K14/01 . . DNA viruses
  - C07K14/015 . . . Parvoviridae, e.g. feline panleukopenia virus, human parvovirus
  - C07K14/02 . . . Hepadnaviridae, e.g. hepatitis B virus
  - C07K14/025 . . . Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus
  - C07K14/03 . . . Herpetoviridae, e.g. pseudorabies virus
  - C07K14/03B . . . . [N: Pseudorabies virus, i.e. Anjletzky virus]
  - C07K14/035 . . . . Herpes simplex virus I or II
  - C07K14/04 . . . . Varicella-zoster virus
  - C07K14/045 . . . . . Cytomegalovirus
  - C07K14/05 . . . . Epstein-Barr virus
  - C07K14/055 . . . . Marek`s disease virus
  - C07K14/06 . . . . Infectious bovine rhinotracheitis virus
  - C07K14/065 . . . . Poxviridae, e.g. avipoxvirus
  - C07K14/07 . . . . Vaccinia virus; Variola virus
  - C07K14/075 . . . . Adenoviridae
  - C07K14/08 . . RNA viruses
    - C07K14/08C . . . [N: Arteriviridae, e.g. EAV, PRRSV] [N9811]
    - C07K14/085 . . . Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus
      - C07K14/09 . . . . Foot-and-mouth disease virus
      - C07K14/095 . . . . Rhinovirus
      - C07K14/10 . . . . Hepatitis A virus
      - C07K14/105 . . . . Poliovirus
      - C07K14/11 . . . . Orthomyxoviridae, e.g. influenza virus
      - C07K14/115 . . . . Paramyxoviridae, e.g. parainfluenza virus
      - C07K14/12 . . . . Mumps virus; Measles virus
      - C07K14/125 . . . . Newcastle disease virus
      - C07K14/13 . . . . Canine distemper virus
      - C07K14/135 . . . . Respiratory syncytial virus
      - C07K14/14 . . . . Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus
      - C07K14/145 . . . . Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokda virus, vesicular stomatitis virus

- C07K14/15 . . . Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus human T-cell leukaemia-lymphoma virus
- C07K14/155 . . . . Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV
- C07K14/16 . . . . . HIV-1; [N: HIV-2] [C9410]
- C07K14/16B . . . . . [N: gag-pol, e.g. p55, p24/25, p17/18, p7, p6, p66/68, p51/52, p31/34, p32, p40]
- C07K14/16D . . . . . [N: env, e.g. gp160, gp110/120, gp41, V3, peptid T, CD4-Binding site]
- C07K14/16F . . . . . [N: Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx]
- C07K14/165 . . . Coronaviridae, e.g. avian infectious bronchitis virus
- C07K14/17 . . . . Porcine transmissible gastroenteritis virus
- C07K14/175 . . . Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus
- C07K14/18 . . . . Togaviridae; [N: Flaviviridae] [N9811]
- C07K14/18A . . . . [N: Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE, semliki forest virus (rubella virus [C07K14/19](#))] [N9811]
- C07K14/18F . . . . [N: Flaviviridae, e.g. pestivirus, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus (hog cholera virus), border disease virus] [N9811]
- C07K14/18F2 . . . . . [N: Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue] [N9811]
- C07K14/18F4 . . . . . [N: Hepatitis C; Hepatitis NANB] [N9811]
- C07K14/18F6 . . . . . [N: Hepatitis G; Hepatitis NANBNCNDNE] [N9811]
- C07K14/19 . . . . Rubella virus
  
- C07K14/195 . . from bacteria

**Note**

In groups [C07K14/20](#) to [C07K14/365](#), where appropriate, after the bacteria terminology, the indication of the order (O), family (F) or genus (G) of the bacteria is given in brackets.

- C07K14/20 . . from Spirochaetales (O), e.g. Treponema, Leptospira
- C07K14/205 . . from Campylobacter (G)
- C07K14/21 . . from Pseudomonadaceae (F)
- C07K14/21B . . . [N: Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella, Psychrobacter] [N9910]
- C07K14/215 . . from Halobacteriaceae (F)
- C07K14/22 . . from Neisseriaceae (F) [C9910]
- C07K14/225 . . from Alcaligenes (G)
- C07K14/23 . . from Brucella (G)
- C07K14/235 . . from Bordetella (G)
- C07K14/24 . . from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia
- C07K14/245 . . . Escherichia (G)
- C07K14/25 . . . Shigella (G)
- C07K14/255 . . . Salmonella (G)
- C07K14/26 . . . Klebsiella (G)
- C07K14/265 . . . Enterobacter (G)

C07K14/27	. . . Erwinia (G)
C07K14/275	. . . Hafnia (G)
C07K14/28	. . from Vibrionaceae (F)
C07K14/285	. . from Pasteurellaceae (F), e.g. Haemophilus influenza
C07K14/29	. . from Rickettsiales (o)
C07K14/295	. . from Chlamydiales (o)
C07K14/30	. . from Mycoplasmatales, e.g. Pleuropneumonia-like organisms (PPLO)
C07K14/305	. . from Micrococcaceae (F)
C07K14/31	. . . from Staphylococcus (G)
C07K14/315	. . from Streptococcus (G), e.g. Enterococci
C07K14/315A	. . . [N: Streptokinase] [N9510]
C07K14/315B	. . . [N: from Streptococcus pneumoniae (Pneumococcus) (Streptokinase C07K14/315A)] [N9804]
C07K14/32	. . from Bacillus (G)
C07K14/325	. . . Bacillus thuringiensis crystal protein (delta-endotoxin)
C07K14/33	. . from Clostridium (G)
C07K14/335	. . from Lactobacillus (G)
C07K14/34	. . from Corynebacterium (G)
C07K14/345	. . from Brevibacterium (G)
C07K14/35	. . from Mycobacteriaceae (F)
C07K14/355	. . from Nocardia (G)
C07K14/36	. . from Actinomyces; from Streptomyces (G)
C07K14/365	. . from Actinoplanes (G)
C07K14/37	. from fungi
C07K14/375	. . from Basidiomycetes
C07K14/38	. . from Aspergillus
C07K14/385	. . from Penicillium
C07K14/39	. . from yeasts
C07K14/395	. . . from Saccharomyces
C07K14/40	. . . from Candida
C07K14/405	. from algae
C07K14/41	. from lichens
C07K14/415	. from plants
C07K14/42	. . Lectins, e.g. concanavalin, phytohaemagglutinin
C07K14/425	. . Zeins
C07K14/43	. . [N: Sweetening agents, e.g.] thaumatin, [N: monellin]
C07K14/435	. from animals; from humans
C07K14/435A	. . [N: from invertebrates] [N9604]
C07K14/435A1	. . . [N: from crustaceans] [N9604]

C07K14/435A2	. . .	[N: from arachnidae] [N9604]
C07K14/435A2A	. . . .	[N: from spiders] [N9604]
C07K14/435A2B	. . . .	[N: from scorpions] [N9604]
C07K14/435A2C	. . . .	[N: from ticks] [N1009]
C07K14/435A2D	. . . .	[N: from mites] [N1009]
C07K14/435A3	. . .	[N: from worms] [N9604]
C07K14/435A3A	. . . .	[N: from nematodes] [N9604]
C07K14/435A3A1	. . . . .	[N: from Caenorhabditis] [N9604]
C07K14/435A3B	. . . .	[N: from cestodes] [N9604]
C07K14/435A3B1	. . . . .	[N: from Taenia] [N9604]
C07K14/435A3C	. . . .	[N: from trematodes] [N9604]
C07K14/435A4	. . .	[N: from insects] [N9604]
C07K14/435A4B	. . . .	[N: from wasps] [N9604]
C07K14/435A4C	. . . .	[N: from bees] [N9604]
C07K14/435A4D	. . . .	[N: from flies] [N9604]
C07K14/435A4D1	. . . . .	[N: from Drosophila] [N9604]
C07K14/435A4E	. . . .	[N: from silkworms] [N9604] [M1204]
C07K14/435A4G	. . . .	[N: from fleas] [N9604]
C07K14/435A5	. . .	[N: from coelenteratae, e.g. medusae] [N9604]
C07K14/44	. .	from protozoa
C07K14/445	. . .	Plasmodium
C07K14/45	. . .	Toxoplasma
C07K14/455	. . .	Eimeria
C07K14/46	. .	from vertebrates
C07K14/46A	. . .	[N: from fish] [N9604]
C07K14/46B	. . .	[N: from amphibians] [N9604]
C07K14/465	. . .	from birds
C07K14/47	. . .	from mammals
C07K14/47A	. . . .	[N: not used]
C07K14/47A1	. . . . .	[N: Regulators; Modulating activity]
C07K14/47A1A	. . . . . .	[N: Inhibitors; Supressors]
C07K14/47A1B	. . . . . .	[N: stimulating, promoting or activating activity]
C07K14/47A1B1	. . . . . . .	{7 dots} [N: Guanosine triphosphatase activating protein, GAP]
C07K14/47A2	. . . . .	[N: Muscular dystrophy]
C07K14/47A2A	. . . . . .	[N: Duchenne dystrophy]
C07K14/47A2B	. . . . . .	[N: Myotonic dystrophy]
C07K14/47A3	. . . . .	[N: Alzheimer's disease; Amyloid plaque core protein]
C07K14/47A4	. . . . .	[N: Cystic fibrosis]
C07K14/47A5	. . . . .	[N: Autoimmune diseases, e.g. Insulin-dependent diabetes mellitus, multiple sclerosis, rheumathoid arthritis, systemic lupus erythematosus; Autoantigens]
C07K14/47A6	. . . . .	[N: Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein]

C07K14/47A7	. . . . .	[N: Muscle proteins, e.g. myosin, actin] [M1204]
C07K14/47A8	. . . . .	[N: Plasma globulins, lactoglobulin]
C07K14/47A9	. . . . .	[N: Cytokine-induced proteins]
C07K14/47A11	. . . . .	[N: Complement proteins, e.g. anaphylatoxin, C3a, C5a]
C07K14/47A12	. . . . .	[N: Lipocortins]
C07K14/47A13	. . . . .	[N: G-proteins]
C07K14/47A14	. . . . .	[N: Cationic antimicrobial peptides, e.g. defensins]
C07K14/47A15	. . . . .	[N: Proteoglycans, e.g. aggrecan]
C07K14/47A16	. . . . .	[N: Lectins]
C07K14/47A17	. . . . .	[N: Mucins, e.g. human intestinal mucin]
C07K14/47A18	. . . . .	[N: Calcium binding proteins, e.g. calmodulin]
C07K14/47A19	. . . . .	[N: alpha-Glycoproteins]
C07K14/47A20	. . . . .	[N: Recognins, e.g. malignin]
C07K14/47A21	. . . . .	[N: Casein (in foodstuffs <a href="#">A23J</a> )]
C07K14/47A22	. . . . .	[N: Acute pancreatitis-associated protein]
C07K14/47A23	. . . . .	[N: Villin]
C07K14/47A24	. . . . .	[N: Retinoblastoma protein]
C07K14/47A25	. . . . .	[N: C-reactive protein]
C07K14/47A26	. . . . .	[N: Cell cycle regulated proteins, e.g. cyclin, CDC, INK-CCR (cell cycle dependent kinases <a href="#">C12N9/12B1</a> )] [C9812]
C07K14/47A27	. . . . .	[N: Pancreatic thread protein; Reg protein]
C07K14/47A28	. . . . .	[N: Keratin; Cytokeratin]
C07K14/47A29	. . . . .	[N: Bactericidal/Permeability-increasing protein (BPI)]
C07K14/47A30	. . . . .	[N: Insulin-like growth factor binding protein]
C07K14/47A31	. . . . .	[N: Cancer-associated SCM-recognition factor, CRISPP]
C07K14/47A32	. . . . .	[N: p53] [N9701]
C07K14/47A33	. . . . .	[N: Apoptosis related proteins] [N9812]
C07K14/47A34	. . . . .	[N: Tumour specific antigens; Tumour rejection antigen precursors (TRAP), e.g. MAGE] [N9902] [C9903]
C07K14/475	. . .	Growth factors; Growth regulators
C07K14/475A	. . .	[N: Hepatocyte growth factor; Scatter factor; Tumor cytotoxic factor II] [N9505]
C07K14/475B	. . .	[N: Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor] [N9606]
C07K14/48	. . .	Nerve growth factor (NGF)
C07K14/485	. . .	Epidermal growth factor (EGF) (urogastrone)
C07K14/49	. . .	Platelet-derived growth factor (PDGF)
C07K14/495	. . .	Transforming growth factor (TGF)
C07K14/50	. . .	Fibroblast growth factors (FGF)
C07K14/50A	. . . . .	[N: acidic FGF (aFGF)]
C07K14/50B	. . . . .	[N: basic FGF (bFGF)]
C07K14/505	. . .	Erythropoietin (EPO)
C07K14/51	. . .	Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor

C07K14/515	. . .	Angiogenesis factors; Angiogenin
C07K14/52	. .	Cytokines; Lymphokines; Interferons
C07K14/52A	. . .	[N: Chemokines] [N9701]
C07K14/52A1	. . . .	[N: 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] [N9701]
C07K14/52A2	. . . .	[N: 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] [N9701]
C07K14/52B	. . .	[N: Thrombopoietin, i.e. C-MPL ligand] [N9701]
C07K14/525	. . .	Tumor necrosis factor (TNF)
C07K14/525B	. . . .	[N: Lymphotoxin (LT)] [N9701]
C07K14/53	. . .	Colony-stimulating factor (CSF)
C07K14/535	. . . .	Granulocyte CSF; Granulocyte-macrophage CSF
C07K14/54	. . .	Interleukins (IL)
C07K14/54A	. . . .	[N: IL-3]
C07K14/54B	. . . .	[N: IL-4]
C07K14/54C	. . . .	[N: IL-5]
C07K14/54D	. . . .	[N: IL-6]
C07K14/54E	. . . .	[N: Leukaemia inhibitory factor (LIF)] [N9810]
C07K14/54F	. . . .	[N: IL-7] [N9810]
C07K14/54G	. . . .	[N: IL-8] [N9810]
C07K14/54H	. . . .	[N: IL-9] [N9810]
C07K14/54K	. . . .	[N: IL-10] [N9810]
C07K14/54L	. . . .	[N: IL-11] [N9810]
C07K14/54M	. . . .	[N: IL-12] [N9810]
C07K14/54N	. . . .	[N: IL-13] [N9810]
C07K14/54P	. . . .	[N: IL-14] [N9810]
C07K14/54Q	. . . .	[N: IL-15] [N9810]
C07K14/54R	. . . .	[N: IL-16] [N9810]
C07K14/545	. . . .	IL-1
C07K14/55	. . . .	IL-2
C07K14/555	. . .	Interferons (IFN)
C07K14/56	. . . .	IFN-alpha
C07K14/565	. . . .	IFN-beta
C07K14/57	. . . .	IFN-gamma
C07K14/575	. .	Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin <a href="#">C07K14/665</a> , e.g. corticotropin <a href="#">C07K14/695</a> )
C07K14/575B	. . .	[N: Corticotropin releasing factor (CRF) (Urotensin)]
C07K14/575D	. . .	[N: Placental lactogen; Chorionic somatomammotropin] [M1204]
C07K14/575F	. . .	[N: Calcitonin gene related peptide]
C07K14/575G	. . .	[N: Endothelin, vasoactive intestinal contractor (VIC)]
C07K14/575H	. . .	[N: Neuropeptide Y]
C07K14/575K	. . .	[N: Prolactin]

C07K14/575L	. . .	[N: Vasoactive intestinal peptide (VIP); Related peptides]
C07K14/575M	. . .	[N: Gastrin releasing peptide ( <b>bombesin</b> <a href="#">C07K7/08D</a> )]
C07K14/575N	. . .	[N: Thymosin; Related peptides]
C07K14/575P	. . .	[N: Products of obesity genes, e.g. leptin, obese (OB), tub, fat] [N9701] [C9807]
C07K14/58	. . .	Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide (ANP); Cardionatrin; Cardiodilatin
C07K14/58A	. . . .	[N: at least 1 amino acid in D-form]
C07K14/585	. . .	Calcitonins
C07K14/585A	. . . .	[N: at least 1 amino acid in D-form]
C07K14/59	. . .	Follicle-stimulating hormone (FSH); Chorionic gonadotropins, e.g. HCG; Luteinising hormone (LH); Thyroid-stimulating hormone (TSH)
C07K14/59A	. . . .	[N: at least 1 amino acid in D-form]
C07K14/595	. . .	Gastrins; Cholecystokinins (CCK)
C07K14/595A	. . . .	[N: at least 1 amino acid in D-form]
C07K14/60	. . .	Growth-hormone releasing factors (GH-RF) (Somatoliberin)
C07K14/605	. . .	Glucagons
C07K14/61	. . .	Growth hormones (GH) (Somatotropin)
C07K14/615	. . . .	Extraction from natural sources
C07K14/62	. . .	Insulins
C07K14/62A	. . . .	[N: at least 1 amino acid in D-form]
C07K14/625	. . . .	extraction from natural sources
C07K14/63	. . .	Motilins
C07K14/635	. . .	Parathyroid hormone (parathormone); Parathyroid hormone-related peptides
C07K14/64	. . .	Relaxins
C07K14/645	. . .	Secretins
C07K14/65	. . .	Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2
C07K14/655	. . .	Somatostatins
C07K14/655A	. . . .	[N: at least 1 amino acid in D-form]
C07K14/66	. . .	Thymopoietins
C07K14/66A	. . . .	[N: at least 1 amino acid in D-form]
C07K14/665	. .	derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin
C07K14/67	. . .	Lipotropins, e.g. beta, gamma lipotropin
C07K14/67A	. . . .	[N: with at least 1 amino acid in D-form]
C07K14/675	. . .	beta-Endorphins
C07K14/675A	. . . .	[N: with at least 1 amino acid in D-form]
C07K14/68	. . .	Melanocyte-stimulating hormone (MSH)
C07K14/685	. . . .	alpha-Melanotropin
C07K14/69	. . . .	beta-Melanotropin
C07K14/695	. . .	Corticotropin (ACTH)
C07K14/695A	. . . .	[N: with at least 1 amino acid in D-form]
C07K14/70	. . .	Enkephalins
C07K14/70A	. . . .	[N: with at least 1 amino acid in D-form]
C07K14/705	. .	Receptors; Cell surface antigens; Cell surface determinants [N: ( <b>tumour specific</b> )]

		antigens <a href="#">C07K14/47A34</a> ] [C9903]
C07K14/705B	. . .	[N: Immunoglobulin superfamily] [C9706]
C07K14/705B10	. . . .	[N: CD2] [N9706]
C07K14/705B12	. . . .	[N: T-cell receptor (TcR)-CD3 complex] [N9706]
C07K14/705B14	. . . .	[N: CD4] [N9706]
C07K14/705B16	. . . .	[N: CD8] [N9706]
C07K14/705B18	. . . .	[N: CD28, CD152] [N9706]
C07K14/705B20	. . . .	[N: ICAM molecules, e.g. CD50, CD54, CD102] [N9706]
C07K14/705B22	. . . .	[N: CD58] [N9706]
C07K14/705B24	. . . .	[N: B7 molecules, e.g. CD80, CD86] [N9706]
C07K14/705B26	. . . .	[N: Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F)] [N9706]
C07K14/705B28	. . . .	[N: MHC-molecules, e.g. HLA-molecules] [N9706]
C07K14/705B30	. . . .	[N: CD106] [N9706]
C07K14/705D	. . .	[N: Integrin superfamily] [C9702]
C07K14/705D10	. . . .	[N: Integrin beta1-subunit-containing molecules, e.g. CD29, CD49] [N9702]
C07K14/705D12	. . . .	[N: Integrin beta2-subunit-containing molecules, e.g. CD11, CD18] [N9702]
C07K14/705D14	. . . .	[N: Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61] [N9702]
C07K14/705F	. . .	[N: Lectin superfamily, e.g. CD23, CD72] [C9706]
C07K14/705F10	. . . .	[N: Selectins, e.g. CD62] [N9706]
C07K14/705G	. . .	[N: Nuclear receptors, e.g. retinoic acid receptor (RAR), RXR, nuclear orphan receptors]
C07K14/705K	. . .	[N: for neuromediators, e.g. serotonin receptor, dopamine receptor]
C07K14/705Q	. . .	[N: NGF/TNF-superfamily, e.g. CD70, CD95L, CD153, CD154 (NGF <a href="#">C07K14/48</a> , TNF <a href="#">C07K14/525</a> )] [N9706]
C07K14/705R	. . .	[N: NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30, CD40, CD95 (NGF-receptor <a href="#">C07K14/71</a> , TNF-receptor <a href="#">C07K14/715B</a> )] [N9706]
C07K14/705S	. . .	[N: CD71] [N9706]
C07K14/705T	. . .	[N: CD44] [N9706]
C07K14/705V	. . .	[N: CD45] [N9706]
C07K14/705W	. . .	[N: CD52] [N9706]
C07K14/705Z	. . .	[N: Molecules with a "CD"-designation not provided for elsewhere] [N9706]
C07K14/71	. . .	for growth factors; for growth regulators
C07K14/715	. . .	for cytokines; for lymphokines; for interferons [C9810]
C07K14/715B	. . . .	[N: for tumor necrosis factor (TNF), for lymphotoxin (LT)] [N9706]
C07K14/715D	. . . .	[N: for colony-stimulating factors (CSF)] [N9706]
C07K14/715F	. . . .	[N: for interleukins (IL)] [N9706]
C07K14/715G	. . . .	[N: for interferons (IFN)] [N9706]
C07K14/715H	. . . .	[N: for chemokines] [N9706]
C07K14/72	. . .	for hormones [N: (for neuromediators <a href="#">C07K14/705K</a> )]
C07K14/72A	. . . .	[N: Steroid/thyroid hormone superfamily, e.g. GR, EcR, androgen receptor, oestrogen receptor]
C07K14/72B	. . . .	[N: G protein coupled receptor, e.g. TSHR-thyrotropin-receptor, LH/hCG receptor, FSH receptor]

- C07K14/745 . . Blood coagulation or fibrinolysis factors
- C07K14/745B . . . [N: Thrombomodulin]
- C07K14/75 . . . Fibrinogen
- C07K14/755 . . . Factors VIII, [N: e.g. factor VIII C (AHF), factor VIII Ag (VWF)]
- C07K14/76 . . Albumins
- C07K14/765 . . . Serum albumin, e.g. HSA
- C07K14/77 . . . Ovalbumin
- C07K14/775 . . Apolipopptides
- C07K14/78 . . Connective tissue peptides, e.g. collagen, elastin, laminin, fibronectin, vitronectin, cold insoluble globulin (CIG)
- C07K14/785 . . Alveolar surfactant peptides; Pulmonary surfactant peptides
- C07K14/79 . . Transferrins, e.g. lactoferrins, ovotransferrins
  
- C07K14/795 . Porphyrin- or corrin-ring-containing peptides
- C07K14/80 . . Cytochromes
- C07K14/805 . . Haemoglobins; Myoglobins
  
- C07K14/81 . Protease inhibitors
- C07K14/81A . . [N: Exopeptidase (E.C. 3.4.11-19) inhibitors] [N9410]
- C07K14/81B . . [N: Endopeptidase (E.C. 3.4.21-99) inhibitors] [N9410]
- C07K14/81B1 . . . [N: Serine protease (E.C. 3.4.21) inhibitors] [N9410]
- C07K14/81B1A . . . . [N: Kunitz type inhibitors] [N9410]
- C07K14/81B1A1 . . . . . [N: Bovine/basic pancreatic trypsin inhibitor (BPTI, aprotinin)] [N9410]
- C07K14/81B1B . . . . . [N: Serpins] [N9410]
- C07K14/81B1B1 . . . . . [N: Alpha-1-antitrypsin] [N9410]
- C07K14/81B1B2 . . . . . [N: Antithrombin III] [N9410]
- C07K14/81B1B3 . . . . . [N: Plasminogen activator inhibitors] [N9410]
- C07K14/81B1C . . . . . [N: Kazal type inhibitors, e.g. pancreatic secretory inhibitor, ovomucoid] [N9410]
- C07K14/81B2 . . . . [N: Cysteine protease (E.C. 3.4.22) inhibitors, e.g. cystatin] [N9410]
- C07K14/81B3 . . . . [N: Aspartate protease (E.C. 3.4.23) inhibitors, e.g. HIV protease inhibitors] [N9410]
- C07K14/81B4 . . . . [N: Metalloprotease (E.C. 3.4.24) inhibitors, e.g. tissue inhibitor of metalloproteinase, TIMP] [N9410]
- C07K14/815 . . from leeches, e.g. hirudin, eglin
- C07K14/82 . Translation products from oncogenes
- C07K14/825 . Metallothioneins
  
- C07K16/00** **Immunoglobulins [IGs], e.g. monoclonal or polyclonal antibodies** [N: (antibodies with enzymatic activity, e.g. abzymes [C12N9/00B](#))] [C0207]

[N: Notes]

1. Documents characterised by the technical aspects of the construction of an antibody

or fragment thereof, should be classified in [C07K16/00](#) to [C07K16/06A](#) or [C07K16/46](#) to [C07K16/46D](#)

2. 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 ICO-codes

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- C07K16/00A . [N: constructed by phage libraries] [N0411]
- C07K16/02 . from eggs
- C07K16/04 . from milk
- C07K16/06 . from serum
- C07K16/06A . . [N: Purification, fragmentation]
- C07K16/08 . against material from viruses
- C07K16/08A . . [N: from DNA viruses] [C9701]
- C07K16/08A12 . . . [N: Hepadnaviridae, e.g. hepatitis B virus] [N9701]
- C07K16/08A14 . . . [N: Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus] [N9701]
- C07K16/08A16 . . . [N: Herpetoviridae, e.g. pseudorabies virus, Epstein-Barr virus] [N9701]
- C07K16/08A16B . . . . [N: Herpes simplex virus] [N9701]
- C07K16/08A16D . . . . [N: Varicella-zoster virus, e.g. cytomegalovirus] [N9701]
- C07K16/10 . . from RNA viruses, [N: e.g. hepatitis E virus]
- C07K16/10B . . . [N: Picornaviridae, e.g. hepatitis A virus] [N9605]
- C07K16/10D . . . [N: Orthomyxoviridae, e.g. influenza virus] [N9605]
- C07K16/10F . . . [N: Paramyxoviridae, e.g. respiratory syncytial virus] [N9605]
- C07K16/10K . . . [N: Retroviridae, e.g. leukemia viruses] [N9605]
- C07K16/10K1 . . . . [N: Lentiviridae, e.g. HIV, FIV, SIV] [N9605]
- C07K16/10K1B . . . . . [N: gag-pol, e.g. p17, p24] [N9605]
- C07K16/10K1D . . . . . [N: env, e.g. gp41, gp110/120, gp160, V3, PND, CD4 binding site] [N9605]
- C07K16/10K1F . . . . . [N: Regulatory proteins, e.g. tat, rev, vpt] [N9605]
- C07K16/10N . . . [N: Togaviridae, e.g. flavivirus, rubella virus, hog cholera virus] [N9605]
- C07K16/10N1 . . . . [N: Hepatitis C virus; Hepatitis G virus] [N9605]
- C07K16/12 . against material from bacteria
- C07K16/12A . . [N: from Gram-negative bacteria] [N9609]
- C07K16/12A10 . . . [N: from Spirochaetales (O), e.g. Treponema, Leptospira] [N9609]
- C07K16/12A12 . . . [N: from Helicobacter (Campylobacter) (G)] [N9609]
- C07K16/12A14 . . . [N: from Pseudomonadaceae (F)] [N9609]
- C07K16/12A18 . . . [N: from Neisseriaceae (F), e.g. Acinetobacter] [N9609]

- C07K16/12A22 . . . [N: from Brucella (G)] [N9609]
- C07K16/12A24 . . . [N: from Bordetella (G)] [N9609]
- C07K16/12A26 . . . [N: from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia] [N9609]
- C07K16/12A26A . . . . [N: from Escherichia (G)] [N9609]
- C07K16/12A26C . . . . [N: from Salmonella (G)] [N9609]
- C07K16/12A28 . . . [N: from Vibrionaceae (G)] [N9609]
- C07K16/12A30 . . . [N: from Pasteurellaceae (F), e.g. Haemophilus influenza] [N9609]
- C07K16/12A32 . . . [N: from Rickettsiales (O)] [N9609]
- C07K16/12A34 . . . [N: from Chlamydiales (O)] [N9609]
- C07K16/12A36 . . . [N: from Mycoplasmatales, e.g. Pleuropneumonia-like organisms (PPL0)] [N9609]
- C07K16/12A38 . . . [N: from Bacteridaceae (F)] [N9609]
- C07K16/12A40 . . . [N: from Legionella (G)] [N9609]
- C07K16/12A42 . . . [N: from Rhizobiaceae (F)] [N9609]
- C07K16/12B . . [N: from Gram-positive bacteria] [N9609]
- C07K16/12B10 . . . [N: from Micrococcaceae (F), e.g. Staphylococcus] [N9609]
- C07K16/12B12 . . . [N: from Streptococcus (G)] [N9609]
- C07K16/12B14 . . . [N: from Bacillus (G)] [N9609]
- C07K16/12B16 . . . [N: from Clostridium (G)] [N9609]
- C07K16/12B20 . . . [N: from Corynebacterium (G)] [N9609]
- C07K16/12B24 . . . [N: from Mycobacteriaceae (F)] [N9609]
- C07K16/12B28 . . . [N: from Actinomyces; from Streptomyces (G)] [N9609]
- C07K16/12B30 . . . [N: from Listeria] [N9609]
  
- C07K16/14 . . against material from fungi, algae or lichens
  
- C07K16/16 . . against material from plants
  
- C07K16/18 . . against material from animals or humans
- C07K16/20 . . from protozoa
- C07K16/20A . . . [N: Plasmodium]
- C07K16/22 . . against growth factors; [N: against growth regulators]
- C07K16/24 . . against cytokines, lymphokines or interferons
- C07K16/24B . . . [N: Tumor Necrosis Factors]
- C07K16/24B10 . . . . [N: Lymphotoxin (LT)] [N9705]
- C07K16/24D . . . [N: Colony Stimulating Factors]
- C07K16/24F . . . [N: Interleukins (IL)] [C9706]
- C07K16/24F1 . . . . [N: IL-1] [N9705]
- C07K16/24F2 . . . . [N: IL-2] [N9705]
- C07K16/24F4 . . . . [N: IL-4] [N9705]
- C07K16/24F6 . . . . [N: IL-6] [N9705]
- C07K16/24H . . . [N: Interferons]
- C07K16/26 . . against hormones; [N: against hormone releasing or inhibiting factors]

C07K16/28	. .	against receptors, cell surface antigens or cell surface determinants
C07K16/28A	. . .	[N: against the immunoglobulin superfamily] [C9702]
C07K16/28A10	. . . .	[N: against CD2] [N9702]
C07K16/28A12	. . . .	[N: against the T-cell receptor (TcR)-CD3 complex] [N9702]
C07K16/28A14	. . . .	[N: against CD4] [N9702]
C07K16/28A16	. . . .	[N: against CD8] [N9702]
C07K16/28A18	. . . .	[N: against CD28 or CD152] [N9702] [C9705]
C07K16/28A20	. . . .	[N: against ICAM molecules, e.g. CD50, CD54, CD102] [N9702]
C07K16/28A22	. . . .	[N: against CD58] [N9702]
C07K16/28A24	. . . .	[N: against B7 molecules, e.g. CD80, CD86] [N9702]
C07K16/28A26	. . . .	[N: against Fc-receptors, e.g. CD16, CD32, CD64 ( <a href="#">CD23</a> <a href="#">C07K16/28C</a> )] [N9702]
C07K16/28A28	. . . .	[N: against MHC-molecules, e.g. HLA-molecules]
C07K16/28A30	. . . .	[N: against CD106] [N9705]
C07K16/28B	. . .	[N: against the integrin superfamily] [C9702]
C07K16/28B10	. . . .	[N: against integrin beta1-subunit-containing molecules, e.g. CD29, CD49] [N9702]
C07K16/28B12	. . . .	[N: against integrin beta2-subunit-containing molecules, e.g. CD11, CD18] [N9702]
C07K16/28B14	. . . .	[N: against integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61] [N9702]
C07K16/28C	. . .	[N: against the lectin superfamily, e.g. CD23, CD72] [C9702]
C07K16/28C10	. . . .	[N: against selectins, e.g. CD62] [N9702]
C07K16/28D	. . .	[N: against nuclear receptors, e.g. retinoic acid receptor (RAR), RXR, orphan receptor]
C07K16/28F	. . .	[N: against neuromediator receptors, e.g. serotonin receptor, dopamine receptor]
C07K16/28G	. . .	[N: against receptors for growth factors, growth regulators]
C07K16/28H	. . .	[N: against receptors for cytokines, lymphokines, interferons]
C07K16/28K	. . .	[N: against hormone receptors ( <a href="#">for antibodies against neuromediator receptors</a> <a href="#">C07K16/28F</a> )]
C07K16/28P	. . .	[N: against prion molecules, e.g. CD230] [N0406]
C07K16/28Q	. . .	[N: against the NGF/TNF superfamily, e.g. CD70, CD95L, CD153, CD154 ( <a href="#">against NGF</a> <a href="#">C07K16/22</a> , <a href="#">against TNF</a> <a href="#">C07K16/24B</a> )] [N9703] [C9705]
C07K16/28R	. . .	[N: against the NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30, CD40, CD95] [N9702] [C0406]
C07K16/28S	. . .	[N: against CD71] [N9702]
C07K16/28T	. . .	[N: against CD44] [N9702]
C07K16/28U	. . .	[N: against CD20] [N0703]
C07K16/28V	. . .	[N: against CD45] [N9702]
C07K16/28W	. . .	[N: against CD52] [N9702]
C07K16/28Z	. . .	[N: against molecules with a "CD"-designation, not provided for elsewhere] [N9702]
C07K16/30	. . .	from tumour cells
C07K16/30A	. . . .	[N: Carcino-embryonic Antigens]

- C07K16/30B . . . . [N: Breast]
- C07K16/30D . . . . [N: Lung]
- C07K16/30F . . . . [N: Liver or Pancreas]
- C07K16/30H . . . . [N: Kidney, bladder]
- C07K16/30K . . . . [N: Stomach, Intestines]
- C07K16/30L . . . . [N: Skin, nerves, brain]
- C07K16/30M . . . . [N: Blood cells]
- C07K16/30P . . . . [N: Reproductive system, e.g. ovaria, uterus, testes, prostate]
- C07K16/30S . . . . [N: against structure-related tumour-associated moieties] [N0406]
- C07K16/30S10 . . . . . [N: against tumour-associated gangliosides] [N0406]
- C07K16/30S20 . . . . . [N: against tumour-associated mucins] [N0406]
- C07K16/32 . . against translation products of oncogenes
- C07K16/34 . . against blood group antigens
- C07K16/36 . . against blood coagulation factors
  
- C07K16/38 . against protease inhibitors of peptide structure
  
- C07K16/40 . against enzymes
  
- C07K16/42 . against immunoglobulins [C0406]
- C07K16/42K . . [N: against an idiotypic determinant on Ig]
- C07K16/42K10 . . . [N: against anti-viral Ig]
- C07K16/42K10A . . . . [N: against anti-HIV Ig]
- C07K16/42K12 . . . [N: against anti-bacterial Ig]
- C07K16/42K14 . . . [N: against anti-human or anti-animal Ig]
- C07K16/42K14A . . . . [N: against anti-protozoal Ig]
- C07K16/42K14B . . . . [N: against anti-receptor Ig]
- C07K16/42K14B1 . . . . . [N: against anti-tumor receptor Ig]
- C07K16/42K14B2 . . . . . [N: against anti-CD4 Ig]
- C07K16/42M . . [N: against an allotypic or isotypic determinant on Ig]
- C07K16/42M10 . . . [N: against IgE]
  
- C07K16/44 . against material not provided for elsewhere, [N: e.g. haptens, metals, DNA, RNA, amino acids] [C0406]
  
- C07K16/46 . Hybrid immunoglobulins (hybrids of an immunoglobulin with a peptide not being an immunoglobulin [C07K19/00](#))
- C07K16/46B . . [N: Igs containing Ig-regions, -domains or -residues from different species] [C9604]
- C07K16/46B1 . . . [N: Igs containing a variable region (Fv) from one specie and a constant region (Fc) from another] [N9604]
- C07K16/46B2 . . . [N: Igs containing CDR-residues from one specie grafted between FR-residues from another] [N9604]
- C07K16/46B2B . . . . [N: with additional modified FR-residues] [N9604]
- C07K16/46B3 . . . [N: Igs with modifications in the FR-residues only] [N9604]

C07K16/46D . . [N: Immunoglobulins having two or more different antigen binding sites, e.g. multifunctional antibodies]

**C07K17/00** **Carrier-bound or immobilised peptides** (carrier-bound or immobilised enzymes [C12N11/00](#)); **Preparation thereof**

C07K17/02 . Peptides being immobilised on, or in, an organic carrier [[C9410](#)]

C07K17/04 . . entrapped within the carrier, e.g. gel, hollow fibre

C07K17/06 . . attached to the carrier via a bridging agent

C07K17/08 . . the carrier being a synthetic polymer

C07K17/10 . . the carrier being a carbohydrate

C07K17/12 . . . Cellulose or derivatives thereof

C07K17/14 . Peptides being immobilised on, or in, an inorganic carrier

**C07K19/00** **Hybrid peptides**