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 in involving enzymes C12Q; investigation or analysis of biological material G01N 33/00)

NOTES
1. 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:
     i. "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;
     ii. "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-butanolic acid. Thus, cyclic compounds in which at least one link in the ring is a non-peptide link are considered as "linear peptides";
     iii. "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\(_2\)CO\(_2\)H and Gly-OCH\(_2\)CO-Ala-Gly are considered as "linear depsipeptides", but HOCH\(_2\)CO-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-OCH\(_2\)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 C07K 5/00.
   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 B01D 15/08 insofar as subject matter of general interest relating to chromatography is concerned.
WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC 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 5/071 covered by C07K 5/0613
- C07K 5/072 covered by C07K 5/06139
- C07K 5/075 covered by C07K 5/0615
- C07K 5/078 covered by C07K 5/0804
- C07K 5/087 covered by C07K 5/0812
- C07K 5/093 covered by C07K 5/0815
- C07K 5/097 covered by C07K 5/0819
- C07K 5/101 covered by C07K 5/0821
- C07K 5/107 covered by C07K 5/1005
- C07K 5/11 covered by C07K 5/1016
- C07K 5/113 covered by C07K 5/1019
- C07K 5/117 covered by C07K 5/1021
- C07K 14/185 covered by C07K 14/1816
- C07K 14/725 covered by C07K 14/705
- C07K 14/735 covered by C07K 14/70535
- C07K 14/747 covered by C07K 14/70539

2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 General methods for the preparation of peptides {, i.e. processes for the organic chemical preparation of peptides or proteins of any length}

- 1/003 . (by transforming the C-terminal amino acid to amides)
- 1/006 . (of peptides containing derivatised side chain amino acids)
- 1/02 . in solution ((C07K 1/003, C07K 1/006 take precedence))
- 1/023 . . (using racemisation inhibiting agents)
- 1/026 . . (by fragment condensation in solution)
- 1/04 . . on carriers ((C07K 1/003, C07K 1/006 take precedence))
- 1/042 . . [characterised by the nature of the carrier]
- 1/045 . . [using devices to improve synthesis, e.g. reactors, special vessels]
- 1/047 . . [Simultaneous synthesis of different peptide species; Peptide libraries]
- 1/06 . . using protecting groups or activating agents ((C07K 1/003, C07K 1/006 take precedence))
- 1/061 . . [using protecting groups]
- 1/062 . . . [for alpha- or omega-carboxy functions]
- 1/063 . . . [for alpha-amino functions]
- 1/064 . . . [for omega-amino or -guanidino functions]
- 1/065 . . . [for hydroxy functions, not being part of carboxy functions]
- 1/066 . . . [for omega-amido functions]
- 1/067 . . . [for sulfur-containing functions]
- 1/068 . . . [for heterocyclic side chains]
- 1/08 . . using activating agents ((C07K 1/003, C07K 1/006 take precedence))

1/082 . . . [containing phosphorus]
1/084 . . . [containing nitrogen]
1/086 . . . [containing sulfur]
1/088 . . . [containing other elements, e.g. B, Si, As]
1/10 . . using coupling agents ((C07K 1/006 takes precedence))
1/107 . . by chemical modification of precursor peptides
1/1072 . . [by covalent attachment of residues or functional groups]
1/1078 . . . [by covalent attachment of amino acids or peptide residues]
1/1077 . . . [by covalent attachment of residues other than amino acids or peptide residues, e.g. sugars, polyols, fatty acids]
1/113 . . without change of the primary structure
1/1133 . . . [by redox-reactions involving cystein/cystin side chains]
1/1136 . . . [by reversible modification of the secondary, tertiary or quarternary structure, e.g. using denaturating or stabilising agents]
1/12 . . by hydrolysis (, i.e. solvolysis in general)
1/122 . . . [Hydrolysis with acids different from HF]
1/124 . . . [Hydrazinolysis]
1/126 . . . [Aminolysis]
1/128 . . . [sequencing]
1/13 . . Labelling of peptides
1/14 . . Extraction; Separation; Purification
1/145 . . . [by extraction or solubilisation]
1/16 . . by chromatography
1/165 . . . [mixed-mode chromatography]
1/18 . . . Ion-exchange chromatography
Dipeptides

5/0225  .  (containing the structure -N-C-C(=O)-N-C(=O)-C-N)
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 - C07K 5/10)
5/04   .  containing only normal peptide links

NOTE

In groups C07K 5/06 - 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;
acidic:  amino acids having in the sidechain more carboxylic acid groups or derivatives thereof than amino groups, e.g. Asp;
basic:  amino acids having in the sidechain more amino groups than carboxylic acid groups or derivatives thereof, e.g. Arg;
aliphatic: amino acids having only acyclic carbon atoms in the sidechain, e.g. Ala
aromatic: 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)-C02H)

C07K 5/06  .  Dipeptides
5/0608  .  [with the first amino acid being neutral]
5/0617  .  [and aliphatic]
5/0626  .  .  [the side chain containing 0 or 1 carbon atom, i.e. Gly or Ala]
5/0634  .  [the side chain containing 2 to 4 carbon atoms]
5/0643  .  .  [Leu-amino acid]
5/0652  .  [Val-amino acid]
5/066  .  [the side chain containing heteroatoms not provided for by C07K 5/06086 - C07K 5/06139, e.g. Ser, Met, Cys, Thr]
5/0669  .  [Ser-amino acid]
5/0678  .  [and aromatic or cycloaliphatic]
5/0686  .  [with the first amino acid being basic]
5/0695  .  [Arg-amino acid]
5/06104  .  [with the first amino acid being acidic]
5/06113  .  [Asp- or Asn-amino acid]
5/06121  .  [the second amino acid being aromatic or cycloaliphatic]
5/0613  .  [Aspartame]
5/06139  .  [with the first amino acid being heterocyclic]
Peptides having 5 to 20 amino acids in a fully defined sequence; Derivatives thereof

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

5/108 . . . [with the first amino acid being basic]  
5/108 . . . [with the first amino acid being acidic]  
5/1021 . . . [with the first amino acid being basic]  
5/1024 . . . [with the first amino acid being acidic]  
5/1027 . . . [containing heteroatoms different from O, S, or N]

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

5/123 . . . [Tripeptides]  
5/126 . . . [Tetrapeptides]

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

7/02 . . . Linear peptides containing at least one abnormal peptide link
7/04 . . . Linear peptides containing only normal peptide links

7/06 . . . having 5 to 11 amino acids
7/062 . . . {Serum thymic factor}
7/065 . . . {Thymic humoral factor}
7/067 . . . {Hemoregulatory peptides based on sequence Glp-Glu-Asp-Cys-Lys}
7/08 . . . having 12 to 20 amino acids (gastrins C07K 14/595; somatostatins C07K 14/655; melanotropins C07K 14/68)
7/083 . . . {Neurotensin}
7/086 . . . {Bombesin; Related peptides (having more than 20 amino acids C07K 14/5752)}
7/14 . . . Angiotensins; Related peptides
7/16 . . . Oxytocins; Vasopressins; Related peptides
7/18 . . . Kallidins; Bradykinins; Related peptides
7/22 . . . {Tachykinins, e.g.} Eledoisins [Substance P]; Related peptides
7/23 . . . Luteinising hormone-releasing hormone [LHRH]; Related peptides
7/28 . . . Gramicidins A, B, D; Related peptides
7/50 . . . Cyclic peptides containing at least one abnormal peptide link
7/52 . . . with only normal peptide links in the ring
7/54 . . . with at least one abnormal peptide link in the ring
7/56 . . . the cyclisation not occurring through 2,4-diamino-butyric acid
7/58 . . . [Bacitracins; Related peptides]
7/60 . . . the cyclisation occurring through the 4-amino group of 2,4-diamino-butyric acid
7/62 . . . [Polymyxins; Related peptides]
7/64 . . . Cyclic peptides containing only normal peptide links
7/645 . . . [Cyclosporins; Related peptides]
7/66 . . . Gramicidins S, C; Tyrocidins A, B, C; Related peptides

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

9/001 . . . [the peptide sequence having less than 12 amino acids and not being part of a ring structure]
9/003 . . . [Peptides being substituted by heterocyclic radicals, e.g. bleomycin, phleomycin]
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]
9/006 . . . [the peptide sequence being part of a ring structure]
9/008 . . . [directly attached to a hetero atom of the saccharide radical, e.g. actaplanin, avoparcin, ristomycin, vancomycin]

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

11/02 . . . cyclic, e.g. valinomycins [Derivatives thereof]

14/00 Peptides having more than 20 amino acids; Atracin; Somatostatin; Melanotropins; Derivatives thereof

14/001 . . . [by chemical synthesis]
14/003 . . . {Peptide-nucleic acids (PNAs)}
When classifying in this 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 C12N 2710/00-C12N 2795/00.

1. From March 15, 2012 groups C07K 14/01 - C07K 14/14 and subgroup thereof are no longer used for the classification of new documents. Reclassification of the back-file follows the principle outlined in the Note here above.

14/005 . . . from viruses

NOTE

When classifying in this 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 C12N 2710/00-C12N 2795/00.

WARNING

1. From March 15, 2012 groups C07K 14/01 - C07K 14/14 and subgroup thereof are no longer used for the classification of new documents. Reclassification of the back-file follows the principle outlined in the Note here above.

14/01 . . . DNA viruses
14/015 . . . Paroviridae, e.g. feline panleukopenia virus, human parvovirus
14/02 . . . Hepadnaviridae, e.g. hepatitis B virus
14/025 . . . Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus
14/03 . . . Herpetoviridae, e.g. pseudorabies virus
14/032 . . . {Pseudorabies virus, i.e. Anjetzky virus]
14/035 . . . Herpes simplex virus I or II
14/04 . . . Varicella-zoster virus
14/045 . . . Cytomegalovirus
14/05 . . . Epstein-Barr virus
14/055 . . . Marek's disease virus
14/06 . . . Infectious bovine rhinotracheitis virus
14/065 . . . Poxviridae, e.g. avipoxvirus
14/07 . . . Vaccinia virus; Variola virus
14/075 . . . Adenoviridae
14/08 . . . RNA viruses
14/082 . . . {Arteriviridae, e.g. EAV, PRRSV]
14/085 . . . Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus
14/09 . . . Foot-and-mouth disease virus
14/095 . . . Rhinovirus
14/10 . . . Hepatitis A virus
14/105 . . . Poliovirus
14/11 . . . Orthomyxoviridae, e.g. influenza virus
14/115 . . . Paramyxoviridae, e.g. parainfluenza virus
14/12 . . . Mumps virus; Measles virus
14/125 . . . Newcastle disease virus
14/13 . . . Canine distemper virus
14/135 . . . Respiratory syncytial virus
14/14 . . . Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus
14/145 . . . Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokola virus, vesicular stomatitis virus
14/15 . . . Retroviridae, e.g. bovine leukemia virus, feline leukemia virus human T-cell leukemia-lymphoma virus
14/155 . . . Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV
14/16 . . . HIV-1 [ HIV-2]
14/161 . . . {gag-pol, e.g. p55, p24/25, p17/18, p7, p6, p60/68, p51/52, p31/34, p32, p40}
14/162 . . . {env, e.g. gp160, gp110/120, gp41, V3, peptid T, CD4-Binding site]
14/163 . . . {Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx}
14/165 . . . Coronaviridae, e.g. avian infectious bronchitis virus
14/17 . . . . Porcine transmissible gastroenteritis virus
14/175 . . . Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus
14/18 . . . . Togaviridae; [Flaviviridae]
14/1808 . . . [Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE, semliki forest virus (rubella virus C07K 14/19)]
14/1816 . . . [Flaviviridae, e.g. pestiviruses, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus (hog cholera virus), border disease virus]
14/1825 . . . [Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue]
14/1833 . . . [Hepatitis C; Hepatitis NANB]
14/1841 . . . [Hepatitis G; Hepatitis NANBNCDNE]
14/19 . . . . Rubella virus
14/195 . . . from bacteria

NOTE

In groups C07K 14/20 - 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.

14/20 . . . from Spirochaetales (O), e.g. Treponema, Leptospira
14/205 . . . from Campylobacter (G)
14/21 . . . from Pseudomonadaceae (F)
14/212 . . . {Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella, Psychrobacter}
14/215 . . . from Halobacteriaceae (F)
14/22 . . . from Neisseriaceae (F)
14/225 . . . from Acaligenes (G)
14/23 . . . from Brucella (G)
14/235 . . . from Bordetella (G)
14/24 . . . from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia
14/245 . . . Escherichia (G)
14/25 . . . Shigella (G)
14/255 . . . Salmonella (G)
14/26 . . . Klebsiella (G)
14/265 . . . Enterobacter (G)
14/27 . . . Erwinia (G)
14/275 . . . Hafnia (G)
14/28 . . . from Vibrionaceae (F)
14/285 . . . from Pasteurellaceae (F), e.g. Haemophilus influenza
14/29 . . . from Richettsiales (O)
14/295 . . . from Chloramiidae (O)
14/30 . . . from Mycoplasmatales, e.g. Pleuropneumonia-like organisms [PPLO]
14/305 . . . from Micrococccaceae (F)
14/31 . . . from Staphylococcaceae (F)
14/315 . . . from Streptococcus (G), e.g. Enterococci
14/3153 . . . [Streptokinase]
14/3156 . . . [from Streptococcus pneumoniae (Pneumococcus) (Streptokinase C07K 14/3153)]
14/32 . . . from Bacillus (G)
14/325 . . . Bacillus thuringiensis crystal protein (delta-endotoxin)
14/33 . . . from Clostridium (G)
14/335 . . . from Lactobacillus (G)
14/34 . . . from Corynebacterium (G)
14/345 . . . from Brevibacterium (G)
14/35 . . . from Mycobacteriaceae (F)
14/355 . . . from Nocardia (G)
14/36 . . . from Actinomyces; from Streptomyces (G)
14/365 . . . from Actinoplanes (G)
14/37 . . . from fungi
14/375 . . . from Basidiomycetes
14/38 . . . from Aspergillus
14/385 . . . from Penicillium
14/39 . . . from yeasts
14/395 . . . from Saccharomyces
14/40 . . . from Candida
14/405 . . . from algae
14/41 . . . from lichens
14/415 . . . from plants
14/42 . . . Lectins, e.g. concanavalin, phytohaemagglutinin
14/425 . . . Zeins
14/43 . . . [Sweetening agents, e.g.] thaumatin, [monellin]
14/435 . . . from animals; from humans
14/43504 . . . from invertibrates)
14/43509 . . . from crustaceans
14/43513 . . . from arachnidae
14/43518 . . . from spiders
14/43522 . . . from scorpions
14/43527 . . . from ticks
14/43531 . . . from mites
14/43536 . . . from worms
14/4354 . . . from nematodes
14/43545 . . . (from Caenorhabditis)
14/4355 . . . from cestodes
14/43555 . . . (from Taenia)
14/43559 . . . from trematodes
14/43563 . . . from insects
14/43568 . . . from wasps
14/43572 . . . from bees
14/43577 . . . from flies
14/43581 . . . from Drosophila
14/43586 . . . from silkworms
14/4359 . . . from fleas
14/43595 . . . (from coelenteratae, e.g. medusae)
14/44 . . . from protozoa
14/445 . . . Plasmodium
14/45 . . . Toxoplasma
14/455 . . . Eimeria
14/46 . . . from vertebrates
14/461 . . . from fish
14/463 . . . from amphibians
14/465 . . . from birds
14/47 . . . from mammals
14/4701 . . . [not used]
14/4702 . . . [Regulators; Modulating activity]
14/4703 . . . [Inhibitors; Suppressors]
14/4705 . . . [stimulating, promoting or activating activity]
14/4706 . . . [Guanosine triphosphatase activating protein, GAP]
14/505  . . . Erythropoietin [EPO]
14/51   . . . Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor
14/515  . . . Angiogenic factors; Angiogenin
14/52   . . . Cytokines; Lymphokines; Interferons
14/521  . . . [Chemokines]
14/522  . . . [Alpha-chemokines, e.g. NAP-2, ENA-78, GRO-alpha/MGSA/NAP-3, GRO-beta/ MIP-2alpha, GRO-gamma/MPL-2beta, IP-10, GCP-2, Mig, PBFS, PF-4, KC]
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]
14/524  . . . [Thrombopoietin, i.e. C-MPL ligand]
14/525  . . . Tumour necrosis factor [TNF]
14/5255 . . . [Lymphtoxin [LT]]
14/53   . . . Colony-stimulating factor [CSF]
14/535  . . . Granulocyte CSF; Granulocyte-macrophage CSF
14/54   . . . Interleukins [IL]
14/5403 . . . [IL-3]
14/5406 . . . [IL-4]
14/5409 . . . [IL-5]
14/5412 . . . [IL-6]
14/5415 . . . [Leukaemia inhibitory factor [LIF]]
14/5418 . . . [IL-7]
14/5421 . . . [IL-8]
14/5425 . . . [IL-9]
14/5428 . . . [IL-10]
14/5431 . . . [IL-11]
14/5434 . . . [IL-12]
14/5437 . . . [IL-13]
14/544   . . . [IL-14]
14/5443 . . . [IL-15]
14/5446 . . . [IL-16]
14/545   . . . IL-1
14/555   . . . Interferons [IFN]
14/56   . . . IFN-alpha
14/565   . . . IFN-beta
14/57    . . . IFN-gamma
14/575   . . . Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin C07K 14/665, e.g. corticotropin C07K 14/695)
14/57509 . . . [Corticotropin releasing factor [CRF] (Urotensin)]
14/57518 . . . [Placental lactogen; Chorionic somatomammatropin]
14/57527 . . . [Calcitonin gene related peptide]
14/57536 . . . [Endothelin, vasoactive intestinal contractor [VIC]]
14/57545 . . . [Neuropeptide Y]
14/57554 . . . [Prolactin]
14/57563 . . . [Vasoactive intestinal peptide [VIP]; Related peptides]
14/57572 . . . [Gastrin releasing peptide (bombesin C07K 7/086)]
14/57581 . . . [Thymosin; Related peptides]
14/5759   . . . [Products of obesity genes, e.g. leptin, obese (OB), tub, fat]
14/58    . . . Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide [ANP]; Cardionatriatin; Cardiodilatin
14/582   . . . [at least 1 amino acid in D-form]
14/585   . . . Calcitonins
14/5855  . . . [at least 1 amino acid in D-form]
14/59    . . . Follicle-stimulating hormone [FSH]; Chorionic gonadotropins, e.g. HCG; Luteinising hormone [LH]; Thyroid-stimulating hormone [TSH]
14/592   . . . [at least 1 amino acid in D-form]
14/595   . . . Gastrins; Cholecystokinins [CCK]
14/5955  . . . [at least 1 amino acid in D-form]
14/60    . . . Growth-hormone releasing factors (GH-RF) (Somatotiberin)
14/605   . . . Glucagons
14/61    . . . Growth hormones [GH] (Somatotropin)
14/615   . . . Extraction from natural sources
14/62    . . . Insulins
14/622   . . . [at least 1 amino acid in D-form]
14/625   . . . Extraction from natural sources
14/63    . . . Motilins
14/635   . . . Parathyroid hormone (parathormone); Parathyroid hormone-related peptides
14/64    . . . Relaxins
14/645   . . . Secretins
14/65    . . . Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2
14/655   . . . Somatostatins
14/6555  . . . [at least 1 amino acid in D-form]
14/66    . . . Thymopoietins
14/662   . . . [at least 1 amino acid in D-form]
14/665   . . . derived from pro-opiomelanocortin, proenkephalin or pro-dynorphin
14/67    . . . Lipotropins, e.g. beta, gamma lipotropin
14/672   . . . [with at least 1 amino acid in D-form]
14/675   . . . Beta-endorphins
14/6755  . . . [with at least 1 amino acid in D-form]
14/68    . . . Melanocyte-stimulating hormone [MSH]
14/685   . . . Alpha-melanotropin
14/690   . . . Beta-melanotropin
14/695   . . . Corticotropin [ACTH]
14/6955  . . . [with at least 1 amino acid in D-form]
14/70    . . . Enkephalins
14/702   . . . [with at least 1 amino acid in D-form]
14/705   . . . Receptors; Cell surface antigens; Cell surface determinants {tumour specific antigens C07K 14/47481}
14/70503 . . . [Immunoglobulin superfamily]
14/70507 . . . [CD2]
14/7051   . . . [T-cell receptor (TcR)-CD3 complex]
14/70514  . . . [CD4]
14/70517   . . . [CD8]
14/70521  . . . [CD28, CD152]
14/70525  . . . [ICAM molecules, e.g. CD50, CD54, CD102]
14/70528  . . . [CD58]
14/70532  . . . [B7 molecules, e.g. CD80, CD86]
14/70535  . . . [Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F)]
14/70539  . . . [MHC-molecules, e.g. HLA-molecules]
14/70542  . . . [CD106]
14/70546  . . . [Integrin superfamily]
2. Documents not characterised by the technical aspects of the construction of an antibody or fragment thereof, should be classified in C07K 16/00 - C07K 16/065 or C07K 16/46 - C07K 16/471.

1. Documents 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.

16/00 Immunoglobulins [IGs], e.g. monoclonal or polyclonal antibodies ([antibodies with enzymatic activity, e.g. abzymes C12N 9/0002])

NOTES

1. 

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 indexing codes.

16/005 [constructed by phage libraries]
16/02 [from eggs]
16/04 [from milk]
16/06 [from serum]
16/065 [Purification, fragmentation]
16/08 [against material from viruses]
16/081 [from DNA viruses]
16/082 [Hepadnaviridae, e.g. hepatitis B virus]
16/084 [Papovaviridae, e.g. papillomavirus, polyomavirus, SV40, BK virus, JC virus]
16/085 [Herpetoviridae, e.g. pseudorabies virus, Epstein-Barr virus]
16/087 [Herpes simplex virus]
16/088 [Varicella-zoster virus, e.g. cytomegalovirus]
16/10 [from RNA viruses, e.g. hepatitis E virus]
16/1009 [Picornaviridae, e.g. hepatitis A virus]
16/1018 [Orthomyxoviridae, e.g. influenza virus]
16/1027 [Paramyxoviridae, e.g. respiratory syncytial virus]
16/1036 [Retroviridae, e.g. leukemia viruses]
16/1045 [Lentiviridae, e.g. HIV, FIV, SIV]
16/1054 [gag-pol, e.g. gp17, p24]
16/1063 [env, e.g. gp41, gp110/120, gp160, V3, PND, CD4 binding site]
16/1072 [Regulatory proteins, e.g. tat, rev, vpr]
16/1081 [Togaviridae, e.g. flavivirus, rubella virus, hog cholera virus]
16/109 [Hepatitis C virus; Hepatitis G virus]
against material from bacteria

against material from fungi, algae or lichens

against hormones { ; against hormone releasing or regulators }

against growth factors { ; against growth from protozoa

against receptors, cell surface antigens or cell surface determinants

against the immunoglobulin superfamily

against the T-cell receptor (TcR)-CD3 complex

against CD8

against CD28 or CD152
C07K

16/42 . against immunoglobulins
16/4208 . [against an idiotypic determinant on Ig]
16/4216 . [against anti-viral Ig]
16/4225 . [against anti-HIV Ig]
16/4233 . [against anti-bacterial Ig]
16/4241 . [against anti-human or anti-animal Ig]
16/425 . [against anti-protozoal Ig]
16/4258 . [against anti-receptor Ig]
16/4266 . . . . [against anti-tumor receptor Ig]
16/4275 . . . . [against anti-CD4 Ig]
16/4283 . . . . [against an allotypic or isotypic determinant on Ig]
16/4291 . . . . [against IgE]
16/44 . against material not provided for elsewhere { e.g. haptens, metals, DNA, RNA, amino acids}
16/46 . Hybrid immunoglobulins (hybrids of an immunoglobulin with a peptide not being an immunoglobulin C07K 19/00)
16/461 . . . . {Igs containing Ig-regions, -domains or -residues form different species}
16/462 . . . . {Igs containing a variable region (Fv) from one specie and a constant region (Fc) from another}
16/464 . . . . {Igs containing CDR-residues from one specie grafted between FR-residues from another}
16/465 . . . . {with additional modified FR-residues}
16/467 . . . . {Igs with modifications in the FR-residues only}
16/468 . . . . (Immunoglobulins having two or more different antigen binding sites, e.g. multifunctional antibodies)

17/00 Carrier-bound or immobilised peptides (carrier-bound or immobilised enzymes C12N 11/00);
Preparation thereof
17/02 . . . Peptides being immobilised on, or in, an organic carrier
17/04 . . . entrapped within the carrier, e.g. gel, hollow fibre
17/06 . . . attached to the carrier via a bridging agent
17/08 . . . the carrier being a synthetic polymer
17/10 . . . the carrier being a carbohydrate
17/12 . . . Cellulose or derivatives thereof
17/14 . . . Peptides being immobilised on, or in, an inorganic carrier

19/00 Hybrid peptides

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

2317/00 Immunoglobulins specific features
2317/10 . characterized by their source of isolation or production
2317/11 . . . isolated from eggs
2317/12 . . . isolated from milk
2317/13 . . . isolated from plants
2317/14 . . . Specific host cells or culture conditions, e.g. components, pH or temperature
2317/20 . characterized by taxonomic origin
2317/21 . . . from primates, e.g. man
2317/22 . . . from camelds, e.g. camel, llama or dromedary
2317/23 . . . from birds
2317/24 . . . containing regions, domains or residues from different species, e.g. chimeric, humanized or veneered
2317/30 . characterized by aspects of specificity or valency
2317/31 . . . multispecific
2317/32 . . . specific for a neo-epitope on a complex, e.g. antibody-antigen or ligand-receptor
2317/33 . . . Crossreactivity, e.g. for species or epitope, or lack of said crossreactivity
2317/34 . . . Identification of a linear epitope shorter than 20 amino acid residues or of a conformational epitope defined by amino acid residues
2317/35 . . . Valency
2317/36 . characterized by post-translational modification
2317/41 . . . Glycosylation, sialylation, or fucoxyslation
2317/50 . . . characterized by immunoglobulin fragments
2317/51 . . . Complete heavy chain or Fd fragment, i.e. VH + CH1
2317/515 . . . Complete light chain, i.e. VL + CL
2317/52 . . . Constant or Fc region; Isotype
2317/522 . . . . CH1 domain
2317/524 . . . . CH2 domain
2317/526 . . . . CH3 domain
2317/528 . . . . CH4 domain
2317/53 . . . . Hinge
2317/54 . . . . F(ab')2
2317/55 . . . . Fab or Fab'
2317/56 . . . variable (Fv) region, i.e. VH and/or VL
2317/565 . . . Complementarity determining region [CDR]
2317/567 . . . Framework region [FR]
2317/569 . . . . Single domain, e.g. dAb, sdAb, VH, VHH, VNAR or nanobody®
2317/60 . . . characterized by non-natural combinations of immunoglobulin fragments
2317/62 . . . . comprising only variable region components
2317/622 . . . . Single chain antibody (scFv)
2317/624 . . . . Disulfide-stabilized antibody (dsFv)
2317/626 . . . . Diabody or triabody
2317/64 . . . . comprising a combination of variable region and constant region components
2317/66 . . . . comprising a swap of domains, e.g. CH3-CH2, VH-CL or VL-CH1
2317/70 . . . characterized by effect upon binding to a cell or to an antigen
2317/71 . . . Decreased effector function due to an Fc-modification
2317/72 . . . Increased effector function due to an Fc-modification
2317/73 . . . Inducing cell death, e.g. apoptosis, necrosis or inhibition of cell proliferation
2317/732 . . . . Antibody-dependent cellular cytotoxicity [ADCC]
2317/734 . . . . Complement-dependent cytotoxicity [CDC]
2317/74 . . . . Inducing cell proliferation
2317/75 . . . . Agonist effect on antigen
2317/76 . . . . Antagonist effect on antigen, e.g. neutralization or inhibition of binding
2317/77 . . . . Internalization into the cell
2317/80 . . . remaining in the (producing) cell, i.e. intracellular antibodies or intrabodies
2317/81 . . . . functional in the endoplasmatic reticulum [ER] or the Golgi apparatus
2317/82 . . . . functional in the cytoplasm, the inner aspect of the cell membrane, the nucleus or the mitochondria
2317/90 . . . . characterized by (pharmacokinetic) aspects or by stability of the immunoglobulin
Fusion polypeptide

- containing a localisation/targetting motif
- containing a signal sequence
- containing a transmembrane segment
- containing a motif for targeting to the internal surface of the plasma membrane, e.g. containing a myristoylation motif
- containing a motif for targeting to the periplasmic space of Gram negative bacteria as a soluble protein, i.e. signal sequence should be cleaved
- 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
- targeting to the medium outside of the cell, e.g. type III secretion
- containing an ER retention signal such as a C-terminal HDEL motif
- containing a Golgi retention signal
- containing a signal for localisation to secretory granules (for exocytosis)
- containing a lysosomal/endosomal localisation signal
- containing a mitochondrial localisation signal
- containing a chloroplasts localisation signal
- containing a nuclear localisation signal
- containing a nuclear export signal
- containing a tag for extracellular membrane crossing, e.g. TAT or VP22
- containing a tag with affinity for a non-protein ligand
- containing a His-tag
- containing a Strep-tag
- containing a GST-tag
- containing a MBP (maltose binding protein)-tag
- Non-immunoglobulin-derived peptide or protein having an immunoglobulin constant or Fc region, or a fragment thereof, attached thereto
- fusions, other than Fc, for prolonged plasma life, e.g. albumin
- fusions with soluble part of a cell surface receptor, "decoy receptors"
- fusions for targeting to specific cell types, e.g. tissue specific targeting, targeting of a bacterial subspecies
- containing a fusion for enhanced stability/folding during expression, e.g. fusions with chaperones or thioredoxin
- containing a tag for immunodetection, or an epitope for immunisation
- containing a Myc-tag
- containing a HA(hemagglutinin)-tag
- containing a FLAG-tag
- containing protease site
- containing a fusion with a toxin, e.g. diptheria toxin
- containing spectroscopic/fluorescent detection, e.g. green fluorescent protein [GFP]
- containing an enzyme fusion for detection (lacZ, luciferase)
- containing domain for protein-protein interaction
- containing a protein-A fusion
- containing domain for transcriptional activation, e.g. VP16
- containing a domain for ligand dependent transcriptional activation, e.g. containing a steroid receptor domain
- containing SH2 domain
- containing coiled-coiled motif (leucine zippers)
- containing a domain for self-assembly, e.g. a viral coat protein (includes phage display)
- containing a fusion for binding to a cell surface receptor
- containing a fusion for activation of a cell surface receptor, e.g. thrombopoectin, NPY and other peptide hormones
- containing a DNA binding domain, e.g. Lacl or Tet-repressor
- containing a Zn-finger domain for DNA binding
- containing an RNA binding domain
- containing a motif for post-translational modification
- containing a motif for glycosylation
- containing a GPI (phosphatidyl-inositol glycane) anchor
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- containing a domain for ligand dependent transcriptional activation, e.g. containing a steroid receptor domain
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