

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](#))

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-diaminobutanoic 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-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.
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.

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

1/00	General methods for the preparation of peptides {, i.e. processes for the organic chemical preparation of peptides or proteins of any length}	1/1077	. . . {by covalent attachment of residues other than amino acids or peptide residues, e.g. sugars, polyols, fatty acids}
1/003	. {by transforming the C-terminal amino acid to amides}	1/113	. . without change of the primary structure
1/006	. {of peptides containing derivatised side chain amino acids}	1/1133	. . . {by redox-reactions involving cystein/cystin side chains}
1/02	. in solution {(C07K 1/003 , C07K 1/006 take precedence)}	1/1136	. . . {by reversible modification of the secondary, tertiary or quarternary structure, e.g. using denaturing or stabilising agents}
1/023	. . {using racemisation inhibiting agents}	1/12	. by hydrolysis {, i.e. solvolysis in general}
1/026	. . {by fragment condensation in solution}	1/122	. . {Hydrolysis with acids different from HF}
1/04	. on carriers {(C07K 1/003 , C07K 1/006 take precedence)}	1/124	. . {Hydrazinolysis}
1/042	. . {characterised by the nature of the carrier}	1/126	. . {Aminolysis}
1/045	. . {using devices to improve synthesis, e.g. reactors, special vessels}	1/128	. . {sequencing}
1/047	. . {Simultaneous synthesis of different peptide species; Peptide libraries}	1/13	. Labelling of peptides
1/06	. using protecting groups or activating agents {(C07K 1/003 , C07K 1/006 take precedence)}	1/14	. Extraction; Separation; Purification
1/061	. . {using protecting groups}	1/145	. . {by extraction or solubilisation}
1/062	. . . {for alpha- or omega-carboxy functions}	1/16	. . by chromatography
1/063	. . . {for alpha-amino functions}	1/165	. . . {mixed-mode chromatography}
1/064	. . . {for omega-amino or -guanidino functions}	1/18	. . . Ion-exchange chromatography
1/065	. . . {for hydroxy functions, not being part of carboxy functions}	1/20	. . . Partition-, reverse-phase or hydrophobic interaction chromatography
1/066	. . . {for omega-amido functions}	1/22	. . . Affinity chromatography or related techniques based upon selective absorption processes
1/067	. . . {for sulfur-containing functions}	1/24	. . by electrochemical means
1/068	. . . {for heterocyclic side chains}	1/26	. . . Electrophoresis
1/08	. . using activating agents {(C07K 1/003 , C07K 1/006 take precedence)}	1/28	. . . . Isoelectric focusing
1/082	. . . {containing phosphorus}	1/285	. . . . {multi dimensional electrophoresis}
1/084	. . . {containing nitrogen}	1/30	. . by precipitation
1/086	. . . {containing sulfur}	1/303	. . . {by salting out}
1/088	. . . {containing other elements, e.g. B, Si, As}	1/306	. . . {by crystallization}
1/10	. using coupling agents {(C07K 1/006 takes precedence)}		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
1/107	. by chemical modification of precursor peptides	1/32	. . . as complexes
1/1072	. . {by covalent attachment of residues or functional groups}	1/34	. . by filtration, ultrafiltration or reverse osmosis
1/1075	. . . {by covalent attachment of amino acids or peptide residues}	1/36	. . by a combination of two or more processes of different types

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

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

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

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

- 5/02 . containing at least one abnormal peptide link
- 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}
- 5/0205 . . {containing the structure -NH-(X)3-C(=O)-, e.g. statine or derivatives thereof}
- 5/0207 . . {containing the structure -NH-(X)4-C(=O)-, e.g. 'isosters', replacing two amino acids}
- 5/021 . . {containing the structure -NH-(X)n-C(=O)-, n being 5 or 6; for n > 6, classification in [C07K 5/06](#) - [C07K 5/10](#), according to the moiety having normal peptide bonds}
- 5/0212 . . {containing the structure -N-C-N-C(=O)-, e.g. retro-inverso peptides}
- 5/0215 . . {containing natural amino acids, forming a peptide bond via their side chain functional group, e.g. epsilon-Lys, gamma-Glu}
- 5/0217 . . {containing the structure -C(=O)-C-N-C(=O)-N-C-C(=O)-}
- 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}
- 5/0222 . . . {with the first amino acid being heterocyclic, e.g. Pro, Trp}
- 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;

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)

- 5/06 . . Dipeptides
- 5/06008 . . . {with the first amino acid being neutral}
- 5/06017 {and aliphatic}
- 5/06026 {the side chain containing 0 or 1 carbon atom, i.e. Gly or Ala}
- 5/06034 {the side chain containing 2 to 4 carbon atoms}
- 5/06043 {Leu-amino acid}
- 5/06052 {Val-amino acid}
- 5/0606 {the side chain containing heteroatoms not provided for by [C07K 5/06086](#) - [C07K 5/06139](#), e.g. Ser, Met, Cys, Thr}
- 5/06069 {Ser-amino acid}
- 5/06078 {and aromatic or cycloaliphatic}
- 5/06086 . . . {with the first amino acid being basic}
- 5/06095 {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}
- 5/06147 {and His-amino acid; Derivatives thereof}
- 5/06156 {and Trp-amino acid; Derivatives thereof}
- 5/06165 {and Pro-amino acid; Derivatives thereof}
- 5/06173 {and Glp-amino acid; Derivatives thereof}
- 5/06182 {and Pristinamycin II; Derivatives thereof}
- 5/06191 . . . {containing heteroatoms different from O, S, or N}
- 5/08 . . Tripeptides
- 5/0802 . . . {with the first amino acid being neutral}
- 5/0804 {and aliphatic}
- 5/0806 {the side chain containing 0 or 1 carbon atoms, i.e. Gly, Ala}
- 5/0808 {the side chain containing 2 to 4 carbon atoms, e.g. Val, Ile, Leu}
- 5/081 {the side chain containing O or S as heteroatoms, e.g. Cys, Ser}
- 5/0812 {and aromatic or cycloaliphatic}
- 5/0815 . . . {with the first amino acid being basic}
- 5/0817 {the first amino acid being Arg}
- 5/0819 . . . {with the first amino acid being acidic}

- 5/0821 . . . {with the first amino acid being heterocyclic, e.g. His, Pro, Trp}
- 5/0823 {and Pro-amino acid; Derivatives thereof}
- 5/0825 {and Gln-amino acid; Derivatives thereof}
- 5/0827 . . . {containing heteroatoms different from O, S, or N}
- 5/10 Tetrapeptides
- 5/1002 . . . {with the first amino acid being neutral}
- 5/1005 {and aliphatic}
- 5/1008 {the side chain containing 0 or 1 carbon atoms, i.e. Gly, Ala}
- 5/101 {the side chain containing 2 to 4 carbon atoms, e.g. Val, Ile, Leu}
- 5/1013 {the side chain containing O or S as heteroatoms, e.g. Cys, Ser}
- 5/1016 {and aromatic or cycloaliphatic}
- 5/1019 . . . {with the first amino acid being basic}
- 5/1021 . . . {with the first amino acid being acidic}
- 5/1024 . . . {with the first amino acid being heterocyclic}
- 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

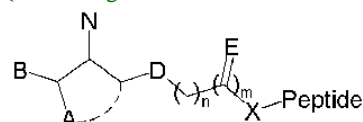
In this subgroup cyclic compounds related to specific compounds which are classified in a specific group, e.g. [C07K 7/062](#), are classified in this specific group only

- 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 Gln-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 14/57572](#))}
- 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-butanoic acid
- 7/58 Bacitracins; Related peptides
- 7/60 . . . the cyclisation occurring through the 4-amino group of 2,4-diamino-butanoic 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; Gastrins; Somatostatins; Melanotropins; Derivatives thereof

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

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

- 14/01 . . . DNA viruses
- 14/015 . . . Parvoviridae, 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	14/195	. from bacteria
14/03	. . . Herpetoviridae, e.g. pseudorabies virus		NOTE
14/032	. . . . {Pseudorabies virus, i.e. Anjatzky virus}		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.
14/035	. . . . Herpes simplex virus I or II		
14/04	. . . . Varicella-zoster virus		
14/045	. . . . Cytomegalovirus		
14/05	. . . . Epstein-Barr virus	14/20	. . from Spirochaetales (O), e.g. Treponema, Leptospira
14/055	. . . . Marek's disease virus	14/205	. . from Campylobacter (G)
14/06	. . . . Infectious bovine rhinotracheitis virus	14/21	. . from Pseudomonadaceae (F)
14/065	. . . Poxviridae, e.g. avipoxvirus	14/212	. . . {Moraxellaceae, e.g. Acinetobacter, Moraxella, Oligella, Psychrobacter}
14/07	. . . . Vaccinia virus; Variola virus	14/215	. . from Halobacteriaceae (F)
14/075	. . . Adenoviridae	14/22	. . from Neisseriaceae (F)
14/08	. . RNA viruses	14/225	. . from Alcaligenes (G)
14/082	. . . {Arteriviridae, e.g. EAV, PRRSV}	14/23	. . from Brucella (G)
14/085	. . . Picornaviridae, e.g. coxsackie virus, echovirus, enterovirus	14/235	. . from Bordetella (G)
14/09	. . . . Foot-and-mouth disease virus	14/24	. . from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia
14/095	. . . . Rhinovirus	14/245	. . . Escherichia (G)
14/10	. . . . Hepatitis A virus	14/25	. . . Shigella (G)
14/105	. . . . Poliovirus	14/255	. . . Salmonella (G)
14/11	. . . Orthomyxoviridae, e.g. influenza virus	14/26	. . . Klebsiella (G)
14/115	. . . Paramyxoviridae, e.g. parainfluenza virus	14/265	. . . Enterobacter (G)
14/12	. . . . Mumps virus; Measles virus	14/27	. . . Erwinia (G)
14/125	. . . . Newcastle disease virus	14/275	. . . Hafnia (G)
14/13	. . . . Canine distemper virus	14/28	. . from Vibrionaceae (F)
14/135	. . . . Respiratory syncytial virus	14/285	. . from Pasteurellaceae (F), e.g. Haemophilus influenza
14/14	. . . Reoviridae, e.g. rotavirus, bluetongue virus, Colorado tick fever virus	14/29	. . from Richettsiales (o)
14/145	. . . Rhabdoviridae, e.g. rabies virus, Duvenhage virus, Mokda virus, vesicular stomatitis virus	14/295	. . from Chlamydiales (o)
14/15	. . . Retroviridae, e.g. bovine leukaemia virus, feline leukaemia virus human T-cell leukaemia-lymphoma virus	14/30	. . from Mycoplasmatales, e.g. Pleuropneumonia-like organisms [PPLO]
14/155	. . . . Lentiviridae, e.g. visna-maedi virus, equine infectious virus, FIV, SIV	14/305	. . from Micrococcaceae (F)
14/16	. . . . . HIV-1; {HIV-2}	14/31	. . . from Staphylococcus (G)
14/161	. . . . . {gag-pol, e.g. p55, p24/25, p17/18, p7, p6, p66/68, p51/52, p31/34, p32, p40}	14/315	. . from Streptococcus (G), e.g. Enterococci
14/162	. . . . . {env, e.g. gp160, gp110/120, gp41, V3, peptid T, CD4-Binding site}	14/3153	. . . {Streptokinase}
14/163	. . . . . {Regulatory proteins, e.g. tat, nef, rev, vif, vpu, vpr, vpt, vpx}	14/3156	. . . {from Streptococcus pneumoniae (Pneumococcus) (Streptokinase C07K 14/3153)}
14/165	. . . Coronaviridae, e.g. avian infectious bronchitis virus	14/32	. . from Bacillus (G)
14/17	. . . . Porcine transmissible gastroenteritis virus	14/325	. . . Bacillus thuringiensis crystal protein (delta-endotoxin)
14/175	. . . Bunyaviridae, e.g. California encephalitis virus, Rift valley fever virus, Hantaan virus	14/33	. . from Clostridium (G)
14/18	. . . Togaviridae; {Flaviviridae}	14/335	. . from Lactobacillus (G)
14/1808	. . . . {Alphaviruses or Group A arboviruses, e.g. sindbis, VEE, EEE, WEE, semliki forest virus (rubella virus C07K 14/19)}	14/34	. . from Corynebacterium (G)
14/1816	. . . . {Flaviviridae, e.g. pestivirus, mucosal disease virus, bovine viral diarrhoea virus, classical swine fever virus (hog cholera virus), border disease virus}	14/345	. . from Brevibacterium (G)
14/1825	. . . . . {Flaviviruses or Group B arboviruses, e.g. yellow fever virus, japanese encephalitis, tick-borne encephalitis, dengue}	14/35	. . from Mycobacteriaceae (F)
14/1833	. . . . . {Hepatitis C; Hepatitis NANB}	14/355	. . from Nocardia (G)
14/1841	. . . . . {Hepatitis G; Hepatitis NANBNCNDNE}	14/36	. . from Actinomyces; from Streptomyces (G)
14/19	. . . . Rubella virus	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	14/4723	. . . . . {Cationic antimicrobial peptides, e.g. defensins}
14/42	. . Lectins, e.g. concanavalin, phytohaemagglutinin	14/4725	. . . . . {Proteoglycans, e.g. aggrecan}
14/425	. . Zeins	14/4726	. . . . . {Lectins}
14/43	. . {Sweetening agents, e.g.} thaumatin, {monellin}	14/4727	. . . . . {Mucins, e.g. human intestinal mucin}
14/435	. from animals; from humans	14/4728	. . . . . {Calcium binding proteins, e.g. calmodulin}
14/43504	. . {from invertebrates}	14/473	. . . . . {alpha-Glycoproteins}
14/43509	. . . {from crustaceans}	14/4731	. . . . . {Recognins, e.g. malignin}
14/43513	. . . {from arachnidae}	14/4732	. . . . . {Casein (in foodstuffs A23J)}
14/43518	. . . . {from spiders}	14/4733	. . . . . {Acute pancreatitis-associated protein}
14/43522	. . . . {from scorpions}	14/4735	. . . . . {Villin}
14/43527	. . . . {from ticks}	14/4736	. . . . . {Retinoblastoma protein}
14/43531	. . . . {from mites}	14/4737	. . . . . {C-reactive protein}
14/43536	. . . {from worms}	14/4738	. . . . . {Cell cycle regulated proteins, e.g. cyclin, CDC, INK-CCR (cell cycle dependent kinases C12N 9/12)}
14/4354	. . . . {from nematodes}	14/474	. . . . . {Pancreatic thread protein; Reg protein}
14/43545	. . . . . {from Caenorhabditis}	14/4741	. . . . . {Keratin; Cytokeratin}
14/4355	. . . . {from cestodes}	14/4742	. . . . . {Bactericidal/Permeability-increasing protein [BPI]}
14/43554	. . . . . {from Taenia}	14/4743	. . . . . {Insulin-like growth factor binding protein}
14/43559	. . . . {from trematodes}	14/4745	. . . . . {Cancer-associated SCM-recognition factor, CRISPP}
14/43563	. . . {from insects}	14/4746	. . . . . {p53}
14/43568	. . . . {from wasps}	14/4747	. . . . . {Apoptosis related proteins}
14/43572	. . . . {from bees}	14/4748	. . . . . {Tumour specific antigens; Tumour rejection antigen precursors [TRAP], e.g. MAGE}
14/43577	. . . . {from flies}	14/475	. . Growth factors; Growth regulators
14/43581	. . . . . {from Drosophila}	14/4753	. . . {Hepatocyte growth factor; Scatter factor; Tumor cytotoxic factor II}
14/43586	. . . . {from silkworms}	14/4756	. . . {Neuregulins, i.e. p185erbB2 ligands, glial growth factor, heregulin, ARIA, neu differentiation factor}
14/4359	. . . . {from fleas}	14/48	. . . Nerve growth factor [NGF]
14/43595	. . . {from coelenteratae, e.g. medusae}	14/485	. . . Epidermal growth factor [EGF] (urogastrone)
14/44	. . from protozoa	14/49	. . . Platelet-derived growth factor [PDGF]
14/445	. . . Plasmodium	14/495	. . . Transforming growth factor [TGF]
14/45	. . . Toxoplasma	14/50	. . . Fibroblast growth factors [FGF]
14/455	. . . Eimeria	14/501	. . . . {acidic FGF [aFGF]}
14/46	. . from vertebrates	14/503	. . . . {basic FGF [bFGF]}
14/461	. . . {from fish}	14/505	. . . Erythropoietin [EPO]
14/463	. . . {from amphibians}	14/51	. . . Bone morphogenetic factor; Osteogenins; Osteogenic factor; Bone-inducing factor
14/465	. . . from birds	14/515	. . . Angiogenesis factors; Angiogenin
14/47	. . . from mammals	14/52	. . Cytokines; Lymphokines; Interferons
14/4701	. . . . {not used}	14/521	. . . {Chemokines}
14/4702	. . . . . {Regulators; Modulating activity}	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}
14/4703	. . . . . {Inhibitors; Suppressors}	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}
14/4705	. . . . . {stimulating, promoting or activating activity}	14/524	. . . {Thrombopoietin, i.e. C-MPL ligand}
14/4706	. . . . . {Guanosine triphosphatase activating protein, GAP}	14/525	. . . Tumor necrosis factor [TNF]
14/4707	. . . . . {Muscular dystrophy}	14/5255	. . . . {Lymphotoxin [LT]}
14/4708	. . . . . {Duchenne dystrophy}	14/53	. . . Colony-stimulating factor [CSF]
14/471	. . . . . {Myotonic dystrophy}	14/535	. . . . Granulocyte CSF; Granulocyte-macrophage CSF
14/4711	. . . . . {Alzheimer's disease; Amyloid plaque core protein}		
14/4712	. . . . . {Cystic fibrosis}		
14/4713	. . . . . {Autoimmune diseases, e.g. Insulin-dependent diabetes mellitus, multiple sclerosis, rheumatoid arthritis, systemic lupus erythematosus; Autoantigens}		
14/4715	. . . . . {Pregnancy proteins, e.g. placenta proteins, alpha-feto-protein, pregnancy specific beta glycoprotein}		
14/4716	. . . . . {Muscle proteins, e.g. myosin, actin}		
14/4717	. . . . . {Plasma globulins, lactoglobulin}		
14/4718	. . . . . {Cytokine-induced proteins}		
14/472	. . . . . {Complement proteins, e.g. anaphylatoxin, C3a, C5a}		
14/4721	. . . . . {Lipocortins}		
14/4722	. . . . . {G-proteins}		

14/54	. . . Interleukins [IL]	14/635	. . . Parathyroid hormone (parathormone); Parathyroid hormone-related peptides
14/5403	. . . . {IL-3}	14/64	. . . Relaxins
14/5406	. . . . {IL-4}	14/645	. . . Secretins
14/5409	. . . . {IL-5}	14/65	. . . Insulin-like growth factors (Somatomedins), e.g. IGF-1, IGF-2
14/5412	. . . . {IL-6}	14/655	. . . Somatostatins
14/5415	. . . . {Leukaemia inhibitory factor [LIF]}	14/6555	. . . . {at least 1 amino acid in D-form}
14/5418	. . . . {IL-7}	14/66	. . . Thymopoietins
14/5421	. . . . {IL-8}	14/662	. . . . {at least 1 amino acid in D-form}
14/5425	. . . . {IL-9}	14/665	. . derived from pro-opiomelanocortin, pro- enkephalin or pro-dynorphin
14/5428	. . . . {IL-10}	14/67	. . . Lipotropins, e.g. beta, gamma lipotropin
14/5431	. . . . {IL-11}	14/672	. . . . {with at least 1 amino acid in D-form}
14/5434	. . . . {IL-12}	14/675	. . . beta-Endorphins
14/5437	. . . . {IL-13}	14/6755	. . . . {with at least 1 amino acid in D-form}
14/544	. . . . {IL-14}	14/68	. . . Melanocyte-stimulating hormone [MSH]
14/5443	. . . . {IL-15}	14/685	. . . . alpha-Melanotropin
14/5446	. . . . {IL-16}	14/69	. . . . beta-Melanotropin
14/545	. . . . IL-1	14/695	. . . Corticotropin [ACTH]
14/55	. . . . IL-2	14/6955	. . . . {with at least 1 amino acid in D-form}
14/555	. . . Interferons [IFN]	14/70	. . . Enkephalins
14/56	. . . . IFN-alpha	14/702	. . . . {with at least 1 amino acid in D-form}
14/565	. . . . IFN-beta	14/705	. . Receptors; Cell surface antigens; Cell surface determinants { tumour specific antigens C07K 14/4748 }
14/57	. . . . IFN-gamma	14/70503	. . . {Immunoglobulin superfamily}
14/575	. . Hormones (derived from pro-opiomelanocortin, pro-enkephalin or pro-dynorphin C07K 14/665 , e.g. corticotropin C07K 14/695)	14/70507	. . . . {CD2}
14/57509	. . . {Corticotropin releasing factor [CRF] (Urotensin)}	14/7051	. . . . {T-cell receptor (TcR)-CD3 complex}
14/57518	. . . {Placental lactogen; Chorionic somatomammotropin}	14/70514	. . . . {CD4}
14/57527	. . . {Calcitonin gene related peptide}	14/70517	. . . . {CD8}
14/57536	. . . {Endothelin, vasoactive intestinal contractor [VIC]}	14/70521	. . . . {CD28, CD152}
14/57545	. . . {Neuropeptide Y}	14/70525	. . . . {ICAM molecules, e.g. CD50, CD54, CD102}
14/57554	. . . {Prolactin}	14/70528	. . . . {CD58}
14/57563	. . . {Vasoactive intestinal peptide [VIP]; Related peptides}	14/70532	. . . . {B7 molecules, e.g. CD80, CD86}
14/57572	. . . {Gastrin releasing peptide (bombesin C07K 7/086)}	14/70535	. . . . {Fc-receptors, e.g. CD16, CD32, CD64 (CD2314/705F)}
14/57581	. . . {Thymosin; Related peptides}	14/70539	. . . . {MHC-molecules, e.g. HLA-molecules}
14/5759	. . . {Products of obesity genes, e.g. leptin, obese (OB), tub, fat}	14/70542	. . . . {CD106}
14/58	. . . Atrial natriuretic factor complex; Atriopeptin; Atrial natriuretic peptide [ANP]; Cardionatrin; Cardiodilatin	14/70546	. . . {Integrin superfamily}
14/582	. . . . {at least 1 amino acid in D-form}	14/7055	. . . . {Integrin beta1-subunit-containing molecules, e.g. CD29, CD49}
14/585	. . . Calcitonins	14/70553	. . . . {Integrin beta2-subunit-containing molecules, e.g. CD11, CD18}
14/5855	. . . . {at least 1 amino acid in D-form}	14/70557	. . . . {Integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61}
14/59	. . . Follicle-stimulating hormone [FSH]; Chorionic gonadotropins, e.g. HCG; Luteinising hormone [LH]; Thyroid-stimulating hormone [TSH]	14/7056	. . . {Lectin superfamily, e.g. CD23, CD72}
14/592	. . . . {at least 1 amino acid in D-form}	14/70564	. . . . {Selectins, e.g. CD62}
14/595	. . . Gastrins; Cholecystokinins [CCK]	14/70567	. . . {Nuclear receptors, e.g. retinoic acid receptor [RAR], RXR, nuclear orphan receptors}
14/5955	. . . . {at least 1 amino acid in D-form}	14/70571	. . . {for neuromediators, e.g. serotonin receptor, dopamine receptor}
14/60	. . . Growth-hormone releasing factors (GH-RF) (Somatoliberein)	14/70575	. . . {NGF/TNF-superfamily, e.g. CD70, CD95L, CD153, CD154 (NGF C07K 14/48 , TNF C07K 14/525)}
14/605	. . . Glucagons	14/70578	. . . {NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30, CD40, CD95 (NGF-receptor C07K 14/71 , TNF-receptor C07K 14/7151)}
14/61	. . . Growth hormones [GH] (Somatotropin)	14/70582	. . . {CD71}
14/615	. . . . Extraction from natural sources	14/70585	. . . {CD44}
14/62	. . . Insulins	14/70589	. . . {CD45}
14/622	. . . . {at least 1 amino acid in D-form}	14/70592	. . . {CD52}
14/625	. . . . extraction from natural sources		
14/63	. . . Motilins		

14/70596 . . . {Molecules with a "CD"-designation not provided for elsewhere}

14/71 . . . for growth factors; for growth regulators

14/715 . . . for cytokines; for lymphokines; for interferons

14/7151 {for tumor necrosis factor [TNF], for lymphotoxin [LT]}

14/7153 {for colony-stimulating factors [CSF]}

14/7155 {for interleukins [IL]}

14/7156 {for interferons [IFN]}

14/7158 {for chemokines}

14/72 . . . for hormones {(for neuromediators [C07K 14/70571](#))}

14/721 {Steroid/thyroid hormone superfamily, e.g. GR, EcR, androgen receptor, oestrogen receptor}

14/723 {G protein coupled receptor, e.g. TSHR-thyrotropin-receptor, LH/hCG receptor, FSH receptor}

14/745 . . Blood coagulation or fibrinolysis factors

14/7455 . . . {Thrombomodulin}

14/75 . . . Fibrinogen

14/755 . . . Factors VIII, {e.g. factor VIII C (AHF), factor VIII Ag (VWF)}

14/76 . . . Albumins

14/765 . . . Serum albumin, e.g. HSA

14/77 . . . Ovalbumin

14/775 . . . Apolipoproteins

14/78 . . . Connective tissue peptides, e.g. collagen, elastin, laminin, fibronectin, vitronectin, cold insoluble globulin [CIG]

14/785 . . . Alveolar surfactant peptides; Pulmonary surfactant peptides

14/79 . . . Transferrins, e.g. lactoferrins, ovotransferrins

14/795 . . . Porphyrin- or corrin-ring-containing peptides

14/80 . . . Cytochromes

14/805 . . . Haemoglobins; Myoglobins

14/81 . . . Protease inhibitors

14/8103 . . . {Exopeptidase (E.C. 3.4.11-19) inhibitors}

14/8107 . . . {Endopeptidase (E.C. 3.4.21-99) inhibitors}

14/811 {Serine protease (E.C. 3.4.21) inhibitors}

14/8114 {Kunitz type inhibitors}

14/8117 {Bovine/basic pancreatic trypsin inhibitor (BPTI, aprotinin)}

14/8121 {Serpins}

14/8125 {Alpha-1-antitrypsin}

14/8128 {Antithrombin III}

14/8132 {Plasminogen activator inhibitors}

14/8135 {Kazal type inhibitors, e.g. pancreatic secretory inhibitor, ovomucoid}

14/8139 {Cysteine protease (E.C. 3.4.22) inhibitors, e.g. cystatin}

14/8142 {Aspartate protease (E.C. 3.4.23) inhibitors, e.g. HIV protease inhibitors}

14/8146 {Metalloprotease (E.C. 3.4.24) inhibitors, e.g. tissue inhibitor of metalloproteinase, TIMP}

14/815 . . . from leeches, e.g. hirudin, eglin

14/82 . . . Translation products from oncogenes

14/825 . . . Metallothioneins

16/00

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

NOTES

1. Documents 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 16/468](#)
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. p17, p24}

16/1063 {env, e.g. gp41, gp110/120, gp160, V3, PND, CD4 binding site}

16/1072 {Regulatory proteins, e.g. tat, rev, vpt}

16/1081 {Togaviridae, e.g. flavivirus, rubella virus, hog cholera virus}

16/109 {Hepatitis C virus; Hepatitis G virus}

16/12 . . against material from bacteria

16/1203 . . . {from Gram-negative bacteria}

16/1207 {from Spirochaetales (O), e.g. Treponema, Leptospira}

16/121 {from Helicobacter (Campylobacter) (G)}

16/1214 {from Pseudomonadaceae (F)}

16/1217 {from Neisseriaceae (F), e.g. Acinetobacter}

16/1221 {from Brucella (G)}

16/1225 {from Bordetella (G)}

16/1228 {from Enterobacteriaceae (F), e.g. Citrobacter, Serratia, Proteus, Providencia, Morganella, Yersinia}

16/1232 {from Escherichia (G)}

16/1235 {from Salmonella (G)}

16/1239 {from Vibrionaceae (G)}

16/1242 {from Pasteurellaceae (F), e.g. Haemophilus influenza}

- 16/1246 . . . {from Rickettsiales (O)}
- 16/125 . . . {from Chlamydiales (O)}
- 16/1253 . . . {from Mycoplasmatales, e.g. Pleuropneumonia-like organisms [PPLO]}
- 16/1257 . . . {from Bacteridaceae (F)}
- 16/126 . . . {from Legionella (G)}
- 16/1264 . . . {from Rhizobiaceae (F)}
- 16/1267 . . {from Gram-positive bacteria}
- 16/1271 . . . {from Micrococcaceae (F), e.g. Staphylococcus}
- 16/1275 . . . {from Streptococcus (G)}
- 16/1278 . . . {from Bacillus (G)}
- 16/1282 . . . {from Clostridium (G)}
- 16/1285 . . . {from Corynebacterium (G)}
- 16/1289 . . . {from Mycobacteriaceae (F)}
- 16/1292 . . . {from Actinomyces; from Streptomyces (G)}
- 16/1296 . . . {from Listeria}
- 16/14 . against material from fungi, alga or lichens
- 16/16 . against material from plants
- 16/18 . against material from animals or humans
- 16/20 . . from protozoa
- 16/205 . . . {Plasmodium}
- 16/22 . . against growth factors; {against growth regulators}
- 16/24 . . against cytokines, lymphokines or interferons
- 16/241 . . . {Tumor Necrosis Factors}
- 16/242 {Lymphotoxin [LT]}
- 16/243 . . . {Colony Stimulating Factors}
- 16/244 . . . {Interleukins [IL]}
- 16/245 {IL-1}
- 16/246 {IL-2}
- 16/247 {IL-4}
- 16/248 {IL-6}
- 16/249 . . . {Interferons}
- 16/26 . . against hormones; {against hormone releasing or inhibiting factors}
- 16/28 . . against receptors, cell surface antigens or cell surface determinants
- 16/2803 . . . {against the immunoglobulin superfamily}
- 16/2806 {against CD2}
- 16/2809 {against the T-cell receptor (TcR)-CD3 complex}
- 16/2812 {against CD4}
- 16/2815 {against CD8}
- 16/2818 {against CD28 or CD152}
- 16/2821 {against ICAM molecules, e.g. CD50, CD54, CD102}
- 16/2824 {against CD58}
- 16/2827 {against B7 molecules, e.g. CD80, CD86}
- 16/283 {against Fc-receptors, e.g. CD16, CD32, CD64 (CD23 C07K 16/2851)}
- 16/2833 {against MHC-molecules, e.g. HLA-molecules}
- 16/2836 {against CD106}
- 16/2839 . . . {against the integrin superfamily}
- 16/2842 {against integrin beta1-subunit-containing molecules, e.g. CD29, CD49}
- 16/2845 {against integrin beta2-subunit-containing molecules, e.g. CD11, CD18}
- 16/2848 {against integrin beta3-subunit-containing molecules, e.g. CD41, CD51, CD61}
- 16/2851 . . . {against the lectin superfamily, e.g. CD23, CD72}
- 16/2854 {against selectins, e.g. CD62}
- 16/2857 . . . {against nuclear receptors, e.g. retinoic acid receptor [RAR], RXR, orphan receptor}
- 16/286 . . . {against neuromediator receptors, e.g. serotonin receptor, dopamine receptor}
- 16/2863 . . . {against receptors for growth factors, growth regulators}
- 16/2866 . . . {against receptors for cytokines, lymphokines, interferons}
- 16/2869 . . . {against hormone receptors (for antibodies against neuromediator receptors C07K 16/286)}
- 16/2872 . . . {against prion molecules, e.g. CD230}
- 16/2875 . . . {against the NGF/TNF superfamily, e.g. CD70, CD95L, CD153, CD154 (against NGF C07K 16/22, against TNF C07K 16/241)}
- 16/2878 . . . {against the NGF-receptor/TNF-receptor superfamily, e.g. CD27, CD30, CD40, CD95}
- 16/2881 . . . {against CD71}
- 16/2884 . . . {against CD44}
- 16/2887 . . . {against CD20}
- 16/289 . . . {against CD45}
- 16/2893 . . . {against CD52}
- 16/2896 . . . {against molecules with a "CD"-designation, not provided for elsewhere}
- 16/30 . . . from tumour cells
- 16/3007 {Carcino-embryonic Antigens}
- 16/3015 {Breast}
- 16/3023 {Lung}
- 16/303 {Liver or Pancreas}
- 16/3038 {Kidney, bladder}
- 16/3046 {Stomach, Intestines}
- 16/3053 {Skin, nerves, brain}
- 16/3061 {Blood cells}
- 16/3069 {Reproductive system, e.g. ovaria, uterus, testes, prostate}
- 16/3076 {against structure-related tumour-associated moieties}
- 16/3084 {against tumour-associated gangliosides}
- 16/3092 {against tumour-associated mucins}
- 16/32 . . against translation products of oncogenes
- 16/34 . . against blood group antigens
- 16/36 . . against blood coagulation factors
- 16/38 . against protease inhibitors of peptide structure
- 16/40 . against enzymes
- 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**
- 2316/00 Immunoglobulins specific feautres**
- 2316/50 . Immunoglobulins characterised by their fragments
- 2316/52 . . Constant or Fc region
- 2316/95 . Antibodies with agonistic, e.g. apoptotic, activity upon their specific binding to an antigen
- 2316/96 . Antibodies with antagonistic activity upon their specific binding to an antigen
- 2317/00 Immunoglobulins specific feautres**
- 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 camelids, 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
- 2317/40 . characterized by post-translational modification
- 2317/41 . . Glycosylation, sialylation, or fucosylation
- 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, 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 (pharmaco)kinetic aspects or by stability of the immunoglobulin
- 2317/92 . . Affinity (KD), association rate (Ka), dissociation rate (Kd) or EC50 value
- 2317/94 . . Stability, e.g. half-life, pH, temperature or enzyme-resistance

2318/00	Antibody mimetics or scaffolds	
2318/10	Immunoglobulin or domain(s) thereof as scaffolds for inserted non-Ig peptide sequences, e.g. for vaccination purposes	
2318/20	Antigen-binding scaffold molecules wherein the scaffold is not an immunoglobulin variable region or antibody mimetics	
2319/00	Fusion polypeptide	
2319/01	containing a localisation/targetting motif	
2319/02	containing a signal sequence	
2319/03	containing a transmembrane segment	
2319/033	containing a motif for targeting to the internal surface of the plasma membrane, e.g. containing a myristoylation motif	
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	
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	
2319/036	targeting to the medium outside of the cell, e.g. type III secretion	
2319/04	containing an ER retention signal such as a C-terminal HDEL motif	
2319/05	containing a GOLGI retention signal	
2319/055	containing a signal for localisation to secretory granules (for exocytosis)	
2319/06	containing a lysosomal/endosomal localisation signal	
2319/07	containing a mitochondrial localisation signal	
2319/08	containing a chloroplast localisation signal	
2319/09	containing a nuclear localisation signal	
2319/095	containing a nuclear export signal	
2319/10	containing a tag for extracellular membrane crossing, e.g. TAT or VP22	
2319/20	containing a tag with affinity for a non-protein ligand	
2319/21	containing a His-tag	
2319/22	containing a Strep-tag	
2319/23	containing a GST-tag	
2319/24	containing a MBP (maltose binding protein)-tag	
2319/30	Non-immunoglobulin-derived peptide or protein having an immunoglobulin constant or Fc region, or a fragment thereof, attached thereto	
2319/31	fusions, other than Fc, for prolonged plasma life, e.g. albumin	
2319/32	fusions with soluble part of a cell surface receptor, "decoy receptors"	
2319/33	fusions for targeting to specific cell types, e.g. tissue specific targeting, targeting of a bacterial subspecies	
2319/35	containing a fusion for enhanced stability/folding during expression, e.g. fusions with chaperones or thioredoxin	
2319/40	containing a tag for immunodetection, or an epitope for immunisation	
2319/41	containing a Myc-tag	
2319/42	containing a HA(hemagglutinin)-tag	
2319/43	containing a FLAG-tag	
2319/50	containing protease site	
2319/55	containing a fusion with a toxin, e.g. diphtheria toxin	
2319/60	containing spectroscopic/fluorescent detection, e.g. green fluorescent protein [GFP]	
2319/61	containing an enzyme fusion for detection (lacZ, luciferase)	
2319/70	containing domain for protein-protein interaction	
2319/705	containing a protein-A fusion	
2319/71	containing domain for transcriptional activation, e.g. VP16	
2319/715	containing a domain for ligand dependent transcriptional activation, e.g. containing a steroid receptor domain	
2319/72	containing SH2 domain	
2319/73	containing coiled-coiled motif (leucine zippers)	
2319/735	containing a domain for self-assembly, e.g. a viral coat protein (includes phage display)	
2319/74	containing a fusion for binding to a cell surface receptor	
2319/75	containing a fusion for activation of a cell surface receptor, e.g. thrombopoietin, NPY and other peptide hormones	
2319/80	containing a DNA binding domain, e.g. LacI or Tet-repressor	
2319/81	containing a Zn-finger domain for DNA binding	
2319/85	containing an RNA binding domain	
2319/90	containing a motif for post-translational modification	
2319/91	containing a motif for glycosylation	
2319/912	containing a GPI (phosphatidyl-inositol glycan) anchor	
2319/915	containing a motif for acylation	
2319/92	containing an intein ("protein splicing") domain	
2319/95	containing a motif/fusion for degradation (ubiquitin fusions, PEST sequence)	