Factsheet: Life, Antibodies

A technology field created by ip-search

1 Definition

Antibodies are widely used molecules in life sciences, and the present technology field definition aims to include all aspects. For the present technology field, antibodies defined as immunoglobulins, in the form of both polyclonal and monoclonal preparations. In addition, antibody fragments as well as complex molecules comprising elements of antibodies, for example immune-conjugates, chimeric antigen receptors, or Fc fusion proteins are included.
A number of CPC/IPC classifications directly linked to antibodies by their definition retrieve most but not all antibody-related patents.
Additional patent classifications not exclusively defined for antibodies were included in combination with a keyword filter in order to expand the present technology field.

2 CPC / IPC

Specific antibody classifications

A61K39/395, A61K47/68, A61K51/10, C07K16, G01N33/563, G01N33/577,

A61K2039/505, C07K2316; C07K2317, C07K2318, C07K2319/30, G01N33/6854

Cooperative Patent Classification (CPC), International Patent Classification (IPC), and Japanese File Index (FI)

CPC/IPC/FI Symbols	Description
A	HUMAN NECESSITIES
A61	MEDICAL OR VETERINARY SCIENCE; HYGIENE
A61K	PREPARATIONS FOR MEDICAL, DENTAL, OR TOILET PURPOSES (devices or methods specially adapted for bringing pharmaceutical products into particular physical or administering forms A61J3/00; chemical aspects of, or use of materials for deodorisation of air, for disinfection or sterilisation, or for bandages, dressings, absorbent pads or surgical articles A61L; soap compositions C11D)
A61K39/00	Medicinal preparations containing antigens or antibodies (materials for immunoassay G01N33/53)
A61K39/395	. Antibodies (agglutinins A61K38/36 {; as drug carriers A61K47/50}); Immunoglobulins; Immune serum, e.g. antilymphocytic serum
A61K2039/505	. {comprising antibodies}
A61K47/00	Medicinal preparations characterised by the non-active ingredients used, e.g. carriers or inert additives; Targeting or modifying agents chemically bound to the active ingredient
A61K47/50	. the non-active ingredient being chemically bound to the active ingredient, e.g. polymer-drug conjugates
A61K47/51	.. the non-active ingredient being a modifying agent
A61K47/68	... the modifying agent being an antibody, an immunoglobulin or a fragment thereof, e.g. an Fc-fragment
A61K51/00	Preparations containing radioactive substances for use in therapy or testing in vivo
A61K51/02	. characterised by the carrier {, i.e. characterised by the agent or material covalently linked or complexing the radioactive nucleus}
A61K51/04	.. Organic compounds
A61K51/08	... Peptides, e.g. proteins {, carriers being peptides, polyamino acids, proteins}
A61K51/10	.... Antibodies or immunoglobulins; Fragments thereof {, the carrier being an antibody, an immunoglobulin or a fragment thereof, e.g. a camelised human single domain antibody or the Fc fragment of an antibody}

CPC/IPC/FI Symbols	Description
C	CHEMISTRY; METALLURGY
C07	ORGANIC CHEMISTRY
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)
C07K16/00	Immunoglobulins [IGs], e.g. monoclonal or polyclonal antibodies {(antibodies with enzymatic activity, e.g. abzymes C12N9/0002)}
C07K2317/00	Immunoglobulins specific features
C07K2318/00	Antibody mimetics or scaffolds
C07K2319/00	Fusion polypeptide
C07K2319/30	. Non-immunoglobulin-derived peptide or protein having an immunoglobulin constant or Fc region, or a fragment thereof, attached thereto
G	PHYSICS
G01	MEASURING; TESTING
G01N	INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES (measuring or testing processes other than immunoassay, involving enzymes or microorganisms C12M, C12Q {; testing electrographic developer properties G03G15/0848; controlling or regulating non-electric variables G05D; measuring degree of ionisation of ionised gases, i.e. plasma H05H1/0006})
G01N33/00	Investigating or analysing materials by specific methods not covered by groups G01N1/00 - G01N31/00
G01N33/48	. Biological material, e.g. blood, urine (G01N33/02, G01N33/26, G01N33/44, G01N33/46 take precedence); Haemocytometers (counting blood corpuscules distributed over a surface by scanning the surface G06M11/02)
G01N33/50	.. Chemical analysis of biological material, e.g. blood, urine; Testing involving biospecific ligand binding methods; Immunological testing (measuring or testing processes involving enzymes or microorganisms, compositions or test papers therefor; processes for forming such compositions, condition responsive control in microbiological or enzymological processes C12Q)
G01N33/53	... Immunoassay; Biospecific binding assay; Materials therefor
G01N33/563	.... involving antibody fragments
G01N33/577	.... involving monoclonal antibodies {binding reaction mechanisms characterised by the use of monoclonal antibodies; monoclonal antibodies per se are classified with their corresponding antigens; (G01N33/53 - G01N33/576 take precedence)}
G01N33/68	... involving proteins, peptides or amino acids {(involving lipoproteins G01N33/92)}
G01N33/6854	.... {Immunoglobulins}

The complete description of the CPC classes with IPC- and FI-concordances can be found in the Internet at https://www.wipo.int/classifications/ipc/ipcpub/?notion=scheme&fipcpc=yes.

Classifications used in combination with the keyword concept

A61K35/17, G01N33/53

Cooperative Patent Classification (CPC), International Patent Classification (IPC), and Japanese File Index (FI)

CPC/IPC/FI Symbols	Description
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A61	MEDICAL OR VETERINARY SCIENCE; HYGIENE
A61K	PREPARATIONS FOR MEDICAL, DENTAL, OR TOILET PURPOSES (devices or methods specially adapted for bringing pharmaceutical products into particular physical or administering forms A61J3/00; chemical aspects of, or use of materials for deodorisation of air, for disinfection or sterilisation, or for bandages, dressings, absorbent pads or surgical articles A61L; soap compositions C11D)
A61K35/00	Medicinal preparations containing materials or reaction products thereof with undetermined constitution
A61K35/12	. Materials from mammals; Compositions comprising non-specified tissues or cells; Compositions comprising non-embryonic stem cells; Genetically modified cells (vaccines or medicinal preparations containing antigens or antibodies A61K39/00)
A61K35/14	.. Blood; Artificial blood (perfluorocarbons A61K31/02; umbilical cord blood A61K35/51; haemoglobin A61K38/42)
A61K35/17	... Lymphocytes; B-cells; T-cells; Natural killer cells; Interferon-activated or cytokine-activated lymphocytes (when activated by a specific antigen A61K39/00)
G	PHYSICS
G01	MEASURING; TESTING
G01N	INVESTIGATING OR ANALYSING MATERIALS BY DETERMINING THEIR CHEMICAL OR PHYSICAL PROPERTIES (measuring or testing processes other than immunoassay, involving enzymes or microorganisms C12M, C12Q {; testing electrographic developer properties G03G15/0848; controlling or regulating non-electric variables G05D; measuring degree of ionisation of ionised gases, i.e. plasma H05H1/0006})
G01N33/00	Investigating or analysing materials by specific methods not covered by groups G01N1/00 - G01N31/00
G01N33/48	. Biological material, e.g. blood, urine (G01N33/02, G01N33/26, G01N33/44, G01N33/46 take precedence); Haemocytometers (counting blood corpuscules distributed over a surface by scanning the surface G06M11/02)
G01N33/50	.. Chemical analysis of biological material, e.g. blood, urine; Testing involving biospecific ligand binding methods; Immunological testing (measuring or testing processes involving enzymes or microorganisms, compositions or test papers therefor; processes for forming such compositions, condition responsive control in microbiological or enzymological processes C12Q)
G01N33/53	... Immunoassay; Biospecific binding assay; Materials therefor

The complete description of the CPC classes with IPC- and FI-concordances can be found in the Internet at https://www.wipo.int/classifications/ipc/ipcpub/?notion=scheme&fipcpc=yes.

3 Keywords

Keyword concept for antibody:

Antibody, immunoglobulin, immune globulin, immunoglobulin, monoclonal

antibod* OR immun?globulin* OR (immun* W globulin*) OR immunglobulin* OR monoclonal* OR darpin? OR nanobod* OR diabod* OR scfv OR immunoadhes* OR (immun* W adhes*) OR (complement* W determin* W region*) OR (constant W domain?) OR Fc?fragment? OR CDR OR CDRs OR (heavy W chain?) OR (light W chain?)

4 Confidence Interval for Precision

Precision is expressed in percent of relevant counts. The 95 % confidence interval for the precision of a technology field is assessed on a set of 108 randomly selected patent families based on a binomial distribution. In the sighting 93 of 100 randomly selected documents appeared relevant:

Precision Confidence Interval: 87 - 97 %

5 History

Version	latest update	No. of patent families (incl. inactives)	remarks
12_19	28.11.2019	147’518 68’025 active	New technology field
03_20	09.03.2020	150’021 69’427 active	No change
09_20	17.08.2020	149’959 65’036 active	Review and update
03_21	09.03.2021	157’951 69’270 active	No change
09_21	17.08.2021	166’399 71’494 active	No change

Table 1: History

6 Contact

For specific information regarding the technology field please contact info@ip-search.swiss

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