Claims:

What is Claimed is:

1) ~~An~~ humanized anti-IL-23p19 antibody or antigen-binding fragment thereof, wherein the antibody or antigen-binding fragment thereof comprises:
   a) a light chain variable region comprising the amino acid sequence of SEQ ID NO:19 *(CDR1-L)*; the amino acid sequence of SEQ ID NO:20 *(CDR2-L)*; and the amino acid sequence of SEQ ID NO:21 *(CDR3-L)*; and
   b) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: ~~63, 66~~ or~~,~~ 67 ~~or 68~~ *(CDR1-H)*; the amino acid sequence of SEQ ID NO:64 *(CDR2-H)*; and the amino acid sequence of SEQ ID NO:65 *(CDR3-H)*.

~~2) The anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim 1, wherein the antibody or antigen-binding fragment thereof comprises:~~
~~a) a light chain variable region comprising the amino acid sequence of SEQ ID NO:19 *(CDR1-L)*; the amino acid sequence of SEQ ID NO:20 *(CDR2-L)*; and the amino acid sequence of SEQ ID NO:21 *(CDR3-L)*; and~~
~~b) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO:63 *(CDR1-H)*; the amino acid sequence of SEQ ID NO:64 *(CDR2-H)*; and the amino acid sequence of SEQ ID NO:65 *(CDR3-H)*.~~

~~3)~~2) The humanized anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim 1, wherein the antibody or antigen-binding fragment thereof comprises:
   a) a light chain variable region comprising the amino acid sequence of SEQ ID NO:19 *(CDR1-L)*; the amino acid sequence of SEQ ID NO:20 *(CDR2-L)*; and the amino acid sequence of SEQ ID NO:21 *(CDR3-L)*; and
   b) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO:66 *(CDR1-H)*; the amino acid sequence of SEQ ID NO:64 *(CDR2-H)*; and the amino acid sequence of SEQ ID NO:65 *(CDR3-H)*.

~~4)~~3) The humanized anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim 1, wherein the antibody or antigen-binding fragment thereof comprises:

a) a light chain variable region comprising the amino acid sequence of SEQ ID NO:19 *(CDR1-L)*; the amino acid sequence of SEQ ID NO:20 *(CDR2-L)*; and the amino acid sequence of SEQ ID NO:21 *(CDR3-L)*; and

b) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO:67 *(CDR1-H)*; the amino acid sequence of SEQ ID NO:64 *(CDR2-H)*; and the amino acid sequence of SEQ ID NO:65 *(CDR3-H)*.

~~5) The anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim 1, wherein the antibody or antigen-binding fragment thereof comprises:~~

~~a) a light chain variable region comprising the amino acid sequence of SEQ ID NO:19 *(CDR1-L)*; the amino acid sequence of SEQ ID NO:20 *(CDR2-L)*; and the amino acid sequence of SEQ ID NO:21 *(CDR3-L)*; and~~

~~b) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO:68 *(CDR1-H)*; the amino acid sequence of SEQ ID NO:64 *(CDR2-H)*; and the amino acid sequence of SEQ ID NO:65 *(CDR3-H)*.~~

~~6)~~4) The humanized anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim 1, wherein the antibody or antigen-binding fragment thereof comprises a light chain variable region comprising the amino acid sequence of any one of SEQ ID NO:158, 160, 162 or 164; and a heavy chain variable region comprising the amino acid sequence any one of SEQ ID NO:166~~,~~ or 168~~, 170 or 172~~.

~~7)~~5) The humanized anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim ~~6~~4, wherein the antibody or antigen-binding fragment thereof comprises a light chain variable region comprising the amino acid sequence of SEQ ID NO:160 and a heavy chain variable region comprising the amino acid sequence SEQ ID NO:166.

~~8)~~6) The humanized anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim ~~6~~4, wherein the antibody or antigen-binding fragment thereof comprises a light chain variable region comprising the amino acid sequence of SEQ ID NO:160 and a heavy chain variable region comprising the amino acid sequence SEQ ID NO:168.

~~9)~~7) The humanized anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim ~~6~~4, wherein the antibody or antigen-binding fragment thereof comprises a light chain variable region comprising the amino acid sequence of SEQ ID NO:158 and a heavy chain variable region comprising the amino acid sequence SEQ ID NO:166.

~~10) The anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim 6, wherein the antibody or antigen-binding fragment thereof comprises a light chain variable region comprising the amino acid sequence of SEQ ID NO:158 and a heavy chain variable region comprising the amino acid sequence SEQ ID NO:168.~~

~~11)~~8) The humanized anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim ~~6~~4, wherein the antibody or antigen-binding fragment thereof comprises the amino acid sequence of SEQ ID NO:166 or 168 linked to a human IgG1 heavy chain constant region; and the amino acid sequence of SEQ ID NO:158 or 160 linked to a human kappa light chain constant region.

~~12)~~9) The humanized anti-IL-23p19 antibody or antigen-binding fragment thereof according to claim 1, wherein the antibody or antigen-binding fragment thereof comprises:

a) a humanized light chain variable domain comprising the CDRs of SEQ ID NO:158 or 160 and framework regions having an amino acid sequence at least 90% identical to the amino acid sequence of the framework regions of the variable domain light chain amino acid sequence of SEQ ID NO:158 or 160; and

b) a humanized heavy chain variable domain comprising the CDRs of SEQ ID NO:166 or 168 and framework regions having an amino acid sequence at least 90% identical to the amino acid sequence of the framework regions of the variable domain heavy chain amino acid sequence of SEQ ID NO:166 or 168.

~~13)~~10) The humanized anti-IL-23p19 antibody according to any one of claims 1 to ~~12~~9, wherein said antibody is a monoclonal antibody.

~~14)~~11) The humanized anti-IL-23p19 antibody according to claim 1, wherein the antibody is a humanized monoclonal anti-IL-23p19 antibody comprising a light chain comprising the amino acid sequence of SEQ ID NO:174 or 180 and a heavy chain comprising the amino acid sequence of SEQ ID NO:176 or 178.

~~15)~~12) The humanized monoclonal anti-IL-23p19 antibody according to claim ~~14~~11, wherein said antibody comprises a light chain comprising the amino acid sequence of SEQ ID NO:174 and a heavy chain comprising the amino acid sequence of SEQ ID NO:176.

~~16)~~13) The humanized monoclonal anti-IL-23p19 antibody according to claim ~~14~~11, wherein said antibody comprises a light chain comprising the amino acid sequence of SEQ ID NO:174 and a heavy chain comprising the amino acid sequence of SEQ ID NO:178.

~~17)~~14) The humanized monoclonal anti-IL-23p19 antibody according to claim ~~14~~11, wherein said antibody comprises a light chain comprising the amino acid sequence of SEQ ID NO:180 and a heavy chain comprising the amino acid sequence of SEQ ID NO:176.

~~18) The monoclonal anti-IL-23p19 antibody according to claim 14, wherein said antibody comprises a light chain comprising the amino acid sequence of SEQ ID NO: 180 and a heavy chain comprising the amino acid sequence of SEQ ID NO: 178.~~

~~19) An anti-IL-23p19 antibody or antigen-binding fragment thereof that binds to human IL-23p19 at an epitope consisting of amino acid residues 108 to 126 and amino acid residues 137 to 151 of SEQ ID NO: 181.~~

~~20) An anti-IL-23p19 antibody or antigen-binding fragment thereof that competitively binds to human IL-23p19 with:~~

~~a) a humanized monoclonal anti-IL-23p19 antibody comprising a light chain comprising the amino acid sequence of SEQ ID NO:174 and a heavy chain comprising the amino acid sequence of SEQ ID NO:176; or~~

~~b) a humanized monoclonal anti-IL-23p19 antibody comprising a light chain comprising the amino acid sequence of SEQ ID NO:174 and a heavy chain comprising the amino acid sequence of SEQ ID NO:178; or~~

~~c) a humanized monoclonal anti-IL-23p19 antibody comprising a light chain comprising the amino acid sequence of SEQ ID NO:180 and a heavy chain comprising the amino acid sequence of SEQ ID NO:176; or~~

~~d) a humanized monoclonal anti-IL-23p19 antibody comprising a light chain comprising the amino acid sequence of SEQ ID NO: 180 and a heavy chain comprising the amino acid sequence of SEQ ID NO: 178.~~

~~21) The anti-IL-23p19 antibody according to any one of claims 19 or 20, wherein said antibody is a monoclonal antibody.~~

~~22)~~15) An antibody or antigen-binding fragment according to any one of claims 1 to ~~21~~ 14 for use in medicine.

~~23)~~16) The antibody or antigen-binding fragment according to claim ~~22~~15, wherein the use is the treatment of an inflammatory disease, of an autoimmune disease, of a respiratory disease, of a metabolic disorder or of cancer.

~~24)~~17) The antibody or antigen-binding fragment according to claim ~~22~~16, wherein the use is for the treatment of psoriasis, inflammatory bowel disease, psoriatic arthritis, multiple sclerosis, rheumatoid arthritis, Crohn's disease, ulcerative colitis or ankylosing spondylitis.

18) The antibody or antigen-binding fragment according to claim 16, wherein the use is for the treatment of asthma or COPD (chronic obstructive pulmonary disease).

~~25)~~19) A pharmaceutical composition comprising an antibody or antigen-binding fragment according to any one of claims 1 to ~~21~~14 and a pharmaceutically acceptable carrier.

~~26)~~20) An isolated polynucleotide comprising a sequence encoding a light chain variable region of an antibody or antibody fragment having the amino acid sequence of SEQ ID NO:158, 160, 162 or 164, ~~or~~ and encoding a heavy chain variable region of an antibody or antibody fragment having the amino acid sequence of SEQ ID NO: 166~~,~~ or 168~~, 170 or 172~~.

~~27)~~21) The isolated polynucleotide according to claim ~~26~~20, wherein said polynucleotide comprises a sequence encoding a light chain of an antibody having the amino acid sequence of SEQ ID NO:174 or 180, ~~or~~ and encoding a heavy chain of an antibody having the amino acid sequence of SEQ ID NO:176 or 178.

22) An expression vector comprising the polynucleotide of claim 20 or 21.

23) A host cell comprising:

a) an isolated polynucleotide comprising a sequence encoding a light chain variable region of an antibody or antibody fragment having the amino acid sequence of SEQ ID NO:158, 160, 162 or 164; and

b) an isolated polynucleotide comprising a sequence encoding a heavy chain variable region of an antibody or antibody fragment having the amino acid sequence of SEQ ID NO: 166 or 168.

24) A host cell comprising:

a) an isolated polynucleotide comprising a sequence encoding a light chain of an antibody having the amino acid sequence of SEQ ID NO:174 or 180; and

b) an isolated polynucleotide comprising a sequence encoding a heavy chain of an antibody having the amino acid sequence of SEQ ID NO:176 or 178.

25) A method for producing an antibody or antigen-binding fragment comprising:

a) obtaining a host cell according to claim 23 or 24; and

b) cultivating the host cell.

26) The method according to claim 25, further comprising recovering and purifying the antibody or antigen-binding fragment.