

Claims

1. A monoclonal antibody or antigen-binding fragment thereof that specifically bind to the beta chain region of the human TCR TRBV9 ~~9th~~ family, comprising a heavy chain variable domain, the amino acid sequence of which is shown in SEQ ID No: 16 and a light chain variable domain, the amino acid sequence of which is shown in SEQ ID No: 18.
2. A monoclonal antibody according to Claim 1, which includes a heavy chain having the amino acid sequence of SEQ ID No: 20 and a light chain having the amino acid sequence of SEQ ID No: 22.
3. A monoclonal antibody according to any of Claims 1-2, which is a full-length IgG antibody.
4. A nucleic acid that encodes the heavy chain and the light chain of a monoclonal antibody or antigen-binding fragment thereof according to any one of Claims 1-3, wherein the antibody or antigen binding fragment thereof specifically binds to the beta chain region of the human TCR TRBV9 ~~9th~~ family.
- ~~5. A nucleic acid that encodes the light chain of a monoclonal antibody or antigen-binding fragment thereof according to any one of Claims 1-3, wherein the antibody or antigen binding fragment thereof specifically binds to the beta chain region of the human TCR TRBV9 ~~9th~~ family.~~
- ~~6~~5. An expression vector containing a nucleic acid according to Claim 4.
- ~~7. An expression vector comprising a nucleic acid according to Claim 5.~~
- ~~8~~6. A method of obtaining a host cell for producing an antibody or antigen-binding fragment thereof according to any of Claims 1-3 comprising co-transformation of a cell with a vector according to Claim 6 ~~and a vector according to Claim 7~~.
- ~~9~~7. A host cell for obtaining an antibody or antigen binding fragment thereof according to any one of Claims 1-3, comprising a nucleic acid according to Claim 4 ~~and a nucleic acid of Claim 5~~.
- ~~10~~8. A method of obtaining an antibody or antigen-binding fragment thereof according to any of Claims 1-3, comprising culturing a host cell according to Claim ~~9~~7 in a culture medium under conditions ensuring the production of said antibody

or antigen-binding fragment thereof, followed by isolation and purification of the obtained antibody or antigen-binding fragment thereof.

~~119.~~ A pharmaceutical composition ~~for preventing or treating a disease or disorder mediated by the beta chain region of the human TCR TRBV9 9th family~~, comprising in a therapeutically effective amount an antibody or antigen-binding fragment thereof according to any of Claims 1-3 in combination with one or more pharmaceutically acceptable excipients.

~~12. A pharmaceutical composition of Claim 11, wherein said disease or disorder is selected from the group: ankylosing spondylitis, celiac disease, T cell leukemia, T cell lymphoma.~~

~~13~~10. A pharmaceutical composition ~~for preventing or treating a disease or disorder mediated by the beta chain region of the human TCR TRBV9 9th family~~, comprising in a therapeutically effective amount an antibody or antigen-binding fragment thereof according to any of Claims 1-3 and at least other therapeutically active compound in a therapeutically effective amount.

~~14. A pharmaceutical composition of Claim 13, wherein said disease or disorder is selected from the group: ankylosing spondylitis, celiac disease, T cell leukemia, T cell lymphoma.~~

~~15~~11. A pharmaceutical composition according to ~~any of Claims 13-14~~10, wherein the other therapeutically active compound is selected from a small molecule, antibody or steroid hormones.

~~16. A method for inhibiting the biological activity of the beta chain region of the human TCR TRBV9 9th family, in a subject in need of such inhibition, comprising administering to the subject an effective amount of an antibody or antigen-binding fragment thereof according to any of Claims 1-3.~~

~~17. A method for treating a disease or disorder mediated by the human TCR bearing beta chain region of the TRBV9 9th family, comprising administering to a subject in need of such treatment an antibody or antigen-binding fragment thereof according to any of Claims 1-3 or a pharmaceutical composition according to any of Claims 11-15 in a therapeutically effective amount.~~

~~18. A method for treating a disease or disorder according to Claim 17, wherein the disease or disorder is selected from the group: ankylosing spondylitis, celiac disease, T cell leukemia, T cell lymphoma.~~

~~19~~12. The ~~use of an~~ antibody or antigen-binding fragment thereof according to any of Claims 1-3 or ~~a the~~ pharmaceutical composition according to any of Claims ~~119-15-11~~ for treating in a subject in need of such treatment a disease or disorder mediated by the of the beta chain region of the human TCR TRBV9 ~~9th~~ family.

~~20. The use according to Claim 19,~~ wherein the disease is selected from the group: ankylosing spondylitis, celiac disease, T cell leukemia, T cell lymphoma.