

What is claimed is:

1. An antagonistic antibody, or an antigen-binding fragment thereof, which binds human TGF-beta 1, human TGF-beta 2 and human TGF-beta 3 comprising a heavy chain, wherein the variable domain of the heavy chain comprises the sequence given in SEQ ID NO:4 for CDR-H1, the sequence given in SEQ ID NO:5 for CDR-H2 and the sequence given in SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8 or SEQ ID NO:9 for CDR-H3 and additionally comprising a light chain, wherein the variable domain of the light chain comprises the sequence given in SEQ ID NO:1 for CDR-L1, the sequence given in SEQ ID NO:2 for CDR-L2 and the sequence given in SEQ ID NO:3 for CDR-L3.
2. The antagonistic antibody, or an antigen-binding fragment thereof, according to claim 1, wherein the antibody comprises a heavy chain comprising the sequence given in SEQ ID NO:52, SEQ ID NO:66, SEQ ID NO:80 or SEQ ID NO:94.
3. The antagonistic antibody, or an antigen-binding fragment thereof, according to any one of claims 1 or 2, wherein the antibody comprises a light chain comprising the sequence given in SEQ ID NO:38.
4. The antagonistic antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 3, wherein the antibody molecule is selected from: a complete antibody molecule having full length heavy and light chains or an antigen-binding fragment thereof, a Fab, modified Fab, modified Fab', Fab', F(ab')₂, Fv, VH, VL and scFv fragment.
5. An antagonistic antibody, or an antigen-binding fragment thereof, which binds human TGF-beta 1, human TGF-beta 2 and human TGF-beta 3, having a heavy chain comprising the sequence given in SEQ ID NO:52 or SEQ ID NO:66, SEQ ID NO:80 or SEQ ID NO:94 and a light chain comprising the sequence given in SEQ ID NO:38.

6. An antagonistic antibody, or an antigen-binding fragment thereof, which binds human TGF-beta 1, human TGF-beta 2 and human TGF-beta 3 having a heavy chain comprising the sequence given in SEQ ID NO:59, SEQ ID NO:73, SEQ ID NO:87 or SEQ ID NO:101 and a light chain comprising the sequence given in SEQ ID NO:45.

7. The antagonistic antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 6, having an effector or a reporter molecule attached to it.

8. The antagonistic antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 7, having a binding affinity for human TGF-beta 1 of 200pM or better, a binding affinity for human TGF-beta 2 of 300pM or better and a binding affinity for human TGF-beta 3 of 2500pM or better.

9. The antagonistic antibody, or an antigen-binding fragment thereof, according to any preceding claim, wherein said antibody or binding fragment thereof is a monoclonal humanized antibody.

10. An isolated DNA sequence encoding the heavy and/or light chain(s) of an antagonistic antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 9.

11. A cloning or expression vector comprising one or more DNA sequences according to claim 10.

12. A vector according to claim 11, wherein the vector comprises a light chain DNA sequences given in SEQ ID NO:46 or SEQ ID NO:47 and/or a heavy chain DNA sequence given in SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:88, SEQ ID NO:89, SEQ ID NO:102 or SEQ ID NO:103.

13. A host cell comprising one or more cloning or expression vectors according to any one of claims 11 or 12.

14. A process for the production of the antibody, or an antigen-binding fragment thereof, of any one of claims 1 to 9, comprising culturing the host cell of claim 13 and isolating the antibody, or an antigen-binding fragment thereof,.

15. A pharmaceutical composition comprising an antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 9 in combination with one or more of a pharmaceutically acceptable excipient, diluent or carrier.

16. A pharmaceutical composition according to claim 15, additionally comprising other active ingredients.

17. A pharmaceutical composition of claim 15 or 16, wherein said pharmaceutical composition is suitable for inhaled administration, for example by nebulisation, aerosol and/or dry powder.

18. The antagonistic antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 9 or the composition according to any one of claims 15 to 17 for use in the treatment or prophylaxis of a pathological disorder that is mediated by TGF-beta 1, 2 or 3 or that is associated with an increased level of TGF-beta 1, 2 or 3, wherein the pathological disorder is fibrosis.

19. The use of the antagonistic antibody, or an antigen-binding fragment thereof, according to any one of claims 1 to 9 in the manufacture of a medicament for the treatment or prophylaxis of a pathological disorder that is mediated by TGF-beta 1, 2 or 3 or that is associated with an increased level of TGF-beta 1, 2 or 3, wherein the pathological disorder is fibrosis.

20. An antagonistic antibody Fab or Fab' fragment according to any one of claims 1 to 9 which binds human TGF-beta 1, human TGF-beta 2 and human TGF-beta 3 for use in the treatment or prophylaxis of a pulmonary disorder that is mediated by TGF-beta 1, 2 or 3 or that

is associated with an increased level of TGF-beta 1, 2 or 3 by inhaled administration, for example by nebulisation, aerosol and/or dry powder, wherein the pulmonary disorder is fibrosis.

21. The use of an antagonistic antibody Fab or Fab' fragment according to any one of claims 1 to 9 which binds human TGF-beta 1, human TGF-beta 2 and human TGF-beta 3 in the manufacture of a medicament for the treatment or prophylaxis of a pulmonary disorder that is mediated by TGF-beta 1, 2 or 3 or that is associated with an increased level of TGF-beta 1, 2 or 3 by inhaled administration, for example by nebulisation, aerosol and/or dry powder, wherein the pulmonary disorder is fibrosis.

22. The antibody according to claim 20 or the use according to claim 21, wherein the antagonistic antibody, or an antigen-binding fragment thereof, is as defined in any one of claims 1 to 9.

23. The antibody according to claim 20 or the use according to claim 21, wherein the fibrosis selected from the group consisting of: pulmonary fibrosis such as idiopathic pulmonary fibrosis, cystic fibrosis or secondary to systemic sclerosis, and pulmonary hypertension such as pulmonary arterial hypertension.