

CLAIMS

1. A recombinant antibody or an antigen binding fragment thereof, which binds to a complex of human glycoprotein A repetitions predominant (GARP) and TGF- β 1, wherein the antibody
5 or antigen binding fragment thereof comprises
a heavy chain variable domain (VH), wherein:
the VH CDR3 comprises the amino acid sequence YEWETVVVGDLMEYEY (SEQ ID NO:
13),
the VH CDR2 comprises the amino acid sequence RIDPEDAGTKYAQKFQG (SEQ ID NO:
10 12), and
the VH CDR1 comprises the amino acid sequence SYYID (SEQ ID NO: 4); and
a light chain variable domain (VL), wherein:
the VL CDR3 comprises the amino acid sequence QQYASVPVT (SEQ ID NO: 11),
the VL CDR2 comprises the amino acid sequence GASRLKT (SEQ ID NO: 10), and
15 the VL CDR1 comprises the amino acid sequence QASQSISSYLA (SEQ ID NO: 9).
2. The antibody of claim 1, wherein the heavy chain variable domain (VH) comprises the amino acid sequence of SEQ ID NO: 14 and the light chain variable domain (VL) comprises the amino acid sequence of SEQ ID NO: 15.
- 20 3. The antibody of claim 1 or 2, which comprises the CH1 domain, hinge region, CH2 domain and/or CH3 domain of a human IgG.
4. The antibody of claim 3, wherein the human IgG is IgG1.
- 25 5. The antibody of claim 3, wherein the human IgG is IgG4.
6. An isolated polynucleotide which encodes the heavy chain variable domain of the antibody or antigen binding fragment of any of claims 1-5.
- 30 7. The isolated polynucleotide of claim 6, which comprises the sequence of SEQ ID NO:18.
8. An isolated polynucleotide which encodes the light chain variable domain of an antibody or antigen binding fragment of any of claims 1-5.
- 35 9. The isolated polynucleotide of claim 8, which comprises the sequence of SEQ ID NO:19.

10. An isolated polynucleotide which encodes the antibody or antigen binding fragment of any of claims 1-5.
- 5 11. An expression vector comprising the polynucleotide of any of claims 6-10 operably linked to regulatory sequences which permit expression of the antibody, antigen binding fragment, heavy chain variable domain, or light chain variable domain in a host cell or cell-free expression system.
- 10 12. A host cell or cell-free expression system containing the expression vector of claim 11.
13. A method of producing a recombinant antibody or antigen binding fragment thereof, comprising
culturing the host cell or cell-free expression system of claim 12 under conditions
15 which permit expression of the antibody or antigen binding fragment; and
recovering the expressed antibody or antigen binding fragment.
14. A pharmaceutical composition comprising an antibody or antigen binding fragment according to any of claims 1 to 5 and at least one pharmaceutically acceptable carrier or
20 excipient.
15. A recombinant antibody, which binds to a complex of human glycoprotein A repetitions predominant (GARP) and TGF- β 1, wherein the antibody comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 16, and a light chain comprising the
25 amino acid sequence of SEQ ID NO: 17.