

CLAIMS

1. An antibody molecule which specifically binds to human CD47 and cynomolgus monkey CD47, and optionally also binds to mouse CD47, or an antigen-binding portion thereof, in which the antibody molecule or antigen-binding portion comprises:

- 5 (a) the amino acid sequences GYSFTNYYIF (SEQ ID NO: 43) (HCDR1), MGDINPVNGDTNYSFQ (SEQ ID NO: 44) (HCDR2), GGYTPDY (SEQ ID NO: 45) (HCDR3), RSSQSLHSHNGYNYLH (SEQ ID NO: 46) (LCDR1), KGSNRFS (SEQ ID NO: 47) (LCDR2) and SQNLHVPRT (SEQ ID NO: 48) (LCDR3) [Clone D-H3]; or
- 10 (b) the amino acid sequences GYTFTNYYIF (SEQ ID NO: 49) (HCDR1), MGIINPVDGDTNYPFQ (SEQ ID NO: 50) (HCDR2), GGYTMDR (SEQ ID NO: 51) (HCDR3), RSSQSLHSHNGYTYLH (SEQ ID NO: 92) (LCDR1), KVSNRSL (SEQ ID NO: 53) (LCDR2) and FQNTHTPRT (SEQ ID NO: 54) (LCDR3) [Clone A-D5]; or
- 15 (c) the amino acid sequences GYSFTNYYIF (SEQ ID NO: 43) (HCDR1), IGDINPVNGDTNYSFQ (SEQ ID NO: 55) (HCDR2), GGYTMDK (SEQ ID NO: 56) (HCDR3), RSSQSLVHSHNGYTYLH (SEQ ID NO: 57) (LCDR1), KGSYRAS (SEQ ID NO: 58) (LCDR2) and SQNTQTPRT (SEQ ID NO: 59) (LCDR3) [Clone G-B6]; or
- 20 (d) the amino acid sequences GYSFTNYYIF (SEQ ID NO: 43) (HCDR1), MGIINPVNGDTNYPFQ (SEQ ID NO: 60) (HCDR2), GGYTMGK (SEQ ID NO: 61) (HCDR3), RSSQSLVHSHNGNTYLD (SEQ ID NO: 62) (LCDR1), KGSYRFS (SEQ ID NO: 63) (LCDR2) and SQATHTPRT (SEQ ID NO: 64) (LCDR3) [Clone F-E7]; or
- 25 (e) the amino acid sequences GYSFTNYYIF (SEQ ID NO: 43) (HCDR1), MGIINPVDGDTRYSPFQ (SEQ ID NO: 65) (HCDR2), GGFTMDY (SEQ ID NO: 66) (HCDR3), RSSQSLHSHNGYNYLH (SEQ ID NO: 46) (LCDR1), KGSNRAS (SEQ ID NO: 67) (LCDR2) and SQNTHTPRT (SEQ ID NO: 68) (LCDR3) [Clone VH-A1/VL-B1]; or
- 30 (f) the amino acid sequences GYTFTNYYIF (SEQ ID NO: 49) (HCDR1), MGIINPVDGDTNYPFQ (SEQ ID NO: 50) (HCDR2), GGYTMDR (SEQ ID NO: 51) (HCDR3), RSSQSLHSHNGYNYLH (SEQ ID NO: 46) (LCDR1), KVSNRSL (SEQ ID NO: 53) (LCDR2) and FQNTHTPRT (SEQ ID NO: 54) (LCDR3) [Clone A-D5.4]; or

(g) the amino acid sequences GYSFTNYYIF (SEQ ID NO: 43) (HCDR1), MGIINPVDGDTRYSPSFQG (SEQ ID NO: 65) (HCDR2), GGYTMDR (SEQ ID NO: 51) (HCDR3), RSSQSLLHSAGYNYLH (SEQ ID NO: 82) (LCDR1), KVS NRLS (SEQ ID NO: 53) (LCDR2) and FQNTHTPRT (SEQ ID NO: 54) (LCDR3) [Clone A-D5.16].

5 2. An antibody molecule or antigen-binding portion according to Claim 1, comprising:

(a) the amino acid sequences GYTFTNYYIF (SEQ ID NO: 49) (HCDR1), MGIINPVDGDTNYPSPFQG (SEQ ID NO: 50) (HCDR2), GGYTMDR (SEQ ID NO: 51) (HCDR3), RSSQSLLHSNGYTYLH (SEQ ID NO: 52) (LCDR1), KVS NRLS (SEQ ID NO: 53) (LCDR2) and FQNTHTPRT (SEQ ID NO: 54) (LCDR3) [Clone A-D5]; or

10 (b) the amino acid sequences GYSFTNYYIF (SEQ ID NO: 43) (HCDR1), MGIINPVDGDTRYSPSFQG (SEQ ID NO: 65) (HCDR2), GGYTMDR (SEQ ID NO: 51) (HCDR3), RSSQSLLHSAGYNYLH (SEQ ID NO: 82) (LCDR1), KVS NRLS (SEQ ID NO: 53) (LCDR2) and FQNTHTPRT (SEQ ID NO: 54) (LCDR3) [Clone A-D5.16].

15 3. An antibody molecule or antigen-binding portion according to Claim 1 or 2, which is human, humanized or chimeric.

4. An antibody molecule or antigen-binding portion according to Claim 1, 2 or 3, comprising one or more human variable domain framework scaffolds into which the CDRs have been inserted.

20 5. An antibody molecule or antigen-binding portion according to any preceding claim, comprising an IGHV5-51 human germline scaffold into which the corresponding HCDR sequences have been inserted.

6. An antibody molecule or antigen-binding portion according to any preceding claim, comprising an IGKV2-28 human germline scaffold into which the corresponding LCDR sequences have been inserted.

25 7. An antibody molecule or antigen-binding portion according to any preceding claim, comprising an immunologically inert constant region.

8. An antibody molecule or antigen-binding portion according to any preceding claim, which is a Fab fragment, a F(ab)₂ fragment, an Fv fragment, a tetrameric antibody, a tetravalent antibody, a multispecific antibody (for example, a bivalent antibody), a single

domain antibody (for example, V_HH or V_{NAR}, or a fragment of either), a monoclonal antibody or a fusion protein.

9. An immunoconjugate comprising an antibody molecule or antigen-binding portion thereof according to any preceding claim linked a therapeutic agent.

5 10. A nucleic acid molecule encoding an antibody molecule or antigen-binding portion thereof according to any of Claims 1 to 8.

11. A vector comprising a nucleic acid molecule according to Claim 10.

12. A host cell comprising a nucleic acid molecule according to Claim 10 or a vector according to Claim 11.

10 13. A pharmaceutical composition comprising an antibody molecule or antigen-binding portion thereof according to any of Claims 1 to 8, an immunoconjugate according to Claim 9, a nucleic acid molecule according to Claim 10 or a vector according to Claim 11.

14. An antibody molecule or antigen-binding portion thereof according to any of Claims 1 to 8, an immunoconjugate according to Claim 9, a nucleic acid molecule according to Claim 10, a vector according to Claim 11 or a pharmaceutical composition according to Claim 13, for use in the treatment of cancer.

15. An antibody molecule or antigen-binding portion thereof, an immunoconjugate, a nucleic acid molecule, a vector or a pharmaceutical composition for use according to Claim 14, in which the antibody, antigen-binding portion thereof, immunoconjugate, nucleic acid, vector or pharmaceutical composition is for separate, sequential or simultaneous use in a combination combined with a second therapeutic agent, for example an anti-cancer agent.

20 16. Use of an antibody molecule or antigen-binding portion thereof according to any of Claims 1 to 8, an immunoconjugate according to Claim 9, a nucleic acid molecule according to Claim 10, a vector according to Claim 11 or a pharmaceutical composition according to Claim 13, in the manufacture of a medicament for the treatment of cancer.