CLAIMS

1. An antibody or antigen-binding fragment thereof, comprising:

(a) the sequence of SEQ ID NO: 3 as variable heavy chain complementarity determining region 3;

(b) the sequence of SEQ ID NO: 1 as variable heavy chain complementarity determining region 1;

(c) the sequence of SEQ ID NO: 2 as variable heavy chain complementarity determining region 2;

(d) the sequence of SEQ ID NO: 5 as variable light chain complementarity determining region 1;

(e) the sequence of SEQ ID NO: 6 as variable light chain complementarity determining region 2; and

(f) a sequence selected from SEQ ID NO: 7, QQEANVYT (SEQ ID NO: 10), QQDSNVYT (SEQ ID NO: 11), QQDANVYT (SEQ ID NO: 12) and QQEGNVYT (SEQ ID NO: 13) as variable light chain complementarity determining region 3.

2. An antibody or antigen-binding fragment thereof according to Claim 1, in which the antibody or antigen-binding fragment thereof comprises a variable heavy chain region comprising the sequence of SEQ ID NO: 4.

3. An antibody or antigen-binding fragment thereof according to Claim 1 or 2, in which the antibody or antigen-binding fragment thereof further comprises a variable light chain region comprising the sequence of SEQ ID NO: 8, SEQ ID NO: 20, SEQ ID NO: 21, SEQ ID NO: 22 or SEQ ID NO: 23.

4. An antibody or antigen-binding fragment thereof according to Claim 1, in which the antibody or an antigen-binding fragment thereof is selected from the group consisting of:

(a) an antibody or antigen binding fragment thereof comprising an HCDR1 comprising the sequence of SEQ ID NO: 1, an HCDR2 comprising the sequence of SEQ ID NO: 2, an HCDR3 comprising the sequence of SEQ ID NO 3, an LCDR1 comprising the sequence of SEQ ID NO: 5, an LCDR2 comprising the sequence of SEQ ID NO: 6, and an LCDR3 comprising the sequence of SEQ ID NO: 7;

(b) an antibody or antigen binding fragment thereof comprising an HCDR1 comprising the sequence of SEQ ID NO: 1, an HCDR2 comprising the sequence of SEQ ID NO: 2, an HCDR3 comprising the sequence of SEQ ID NO 3, an LCDR1 comprising the sequence of SEQ ID NO: 5, an LCDR2 comprising the sequence of SEQ ID NO: 6, and an LCDR3 comprising the sequence of SEQ ID NO: 10;

(c) an antibody or antigen binding fragment thereof comprising an HCDR1 comprising the sequence of SEQ ID NO: 1, an HCDR2 comprising the sequence of SEQ ID NO: 2, an HCDR3 comprising the sequence of SEQ ID NO 3, an LCDR1 comprising the sequence of SEQ ID NO: 5, an LCDR2 comprising the sequence of SEQ ID NO: 6, and an LCDR3 comprising the sequence of SEQ ID NO: 11;

(d) an antibody or antigen binding fragment thereof comprising an HCDR1 comprising the sequence of SEQ ID NO: 1, an HCDR2 comprising the sequence of SEQ ID NO: 2, an HCDR3 comprising the sequence of SEQ ID NO 3, an LCDR1 comprising the sequence of SEQ ID NO: 5, an LCDR2 comprising the sequence of SEQ ID NO: 6, and an LCDR3 comprising the sequence of SEQ ID NO: 12

(e) an antibody or antigen binding fragment thereof comprising an HCDR1 comprising the sequence of SEQ ID NO: 1, an HCDR2 comprising the sequence of SEQ ID NO: 2, an HCDR3 comprising the sequence of SEQ ID NO 3, an LCDR1 comprising the sequence of SEQ ID NO: 5, an LCDR2 comprising the sequence of SEQ ID NO: 6, and an LCDR3 comprising the sequence of SEQ ID NO: 13;

(f) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 4 and a light chain variable region comprising the sequence of SEQ ID NO: 8;

(g) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 4 and a light chain variable region comprising the sequence of SEQ ID NO: 20;

(h) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 4 and a light chain variable region comprising the sequence of SEQ ID NO: 21.

(i) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 4 and a light chain variable region comprising the sequence of SEQ ID NO: 22;

(j) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 4 and a light chain variable region comprising the sequence of SEQ ID NO: 23;

(k) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 14 and a light chain variable region comprising the sequence of SEQ ID NO: 19;

(l) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 14 and a light chain variable region comprising the sequence of SEQ ID NO: 15;

(m) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 14 and a light chain variable region comprising the sequence of SEQ ID NO: 16;

(n) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 14 and a light chain variable region comprising the sequence of SEQ ID NO: 17; and

(o) an antibody or antigen binding fragment thereof comprising a heavy chain variable region comprising the sequence of SEQ ID NO: 14 and a light chain variable region comprising the sequence of SEQ ID NO: 18.

5. An antibody or an antigen-binding fragment thereof according to any preceding claim, in which the antibody or antigen-binding fragment thereof is a-fucosylated.

6. An antibody or antigen-binding fragment thereof that specifically binds to an epitope of human CD38, in which the epitope comprises amino acids 65-79 of SEQ ID NO: 9.

7. An antibody or antigen-binding fragment thereof according to any preceding claim, in which the antibody or antigen-binding fragment thereof is a monoclonal antibody, a domain antibody, a single chain antibody, a Fab fragment, a F(ab')2 fragment, a single chain variable fragment (scFv), a scFv-Fc fragment, a single chain antibody (scAb), or a nanobody.

8. An antibody or antigen-binding fragment thereof according to any preceding claim, in which the antibody or antigen-binding fragment thereof is a rabbit, mouse, chimeric, humanized or fully human antigen-binding antibody.

9. An antibody or antigen-binding fragment thereof according to any preceding claim, in which the antibody or antigen-binding fragment thereof is selected from the group consisting of IgG1, IgG2, IgG3, and IgG4 isotype antibodies.

10. An antibody or antigen-binding fragment thereof according to any preceding claim, in which the antibody or antigen-binding fragment thereof is comprised in a bispecific antibody, a multispecific antibody, or an immunoconjugate further comprising a therapeutic or diagnostic agent.

11. An antibody or antigen-binding fragment thereof according to any preceding claim, in which the antibody or antigen-binding fragment thereof binds the extracellular domain of human CD38.

12. An antibody or antigen-binding fragment thereof according to any preceding claim, in which the antibody or antigen-binding fragment thereof binds cells expressing human CD38 on their surface.

13. A nucleic acid molecule encoding an antibody or antigen-binding fragment thereof according to any preceding claim.

14. A nucleic acid vector comprising a nucleic acid molecule according to Claim 13.

15. A host cell comprising a nucleic acid vector according to Claim 14.

16. A method for producing an antibody or antigen-binding fragment thereof according to any of Claims 1 to 12 by culturing a host cell according to Claim 15.

17. A composition comprising an antibody or antigen-binding fragment thereof according to any of Claims 1 to 12 and a pharmaceutically acceptable carrier or excipient.

18. A composition according to Claim 17 for use in the treatment of cancer.

19. Use of an antibody or antigen-binding fragment thereof according to any of Claims 1 to 12 in the manufacture of a medicament for treating a cancer.

20. A composition for use according to Claim 18 or a use according to Claim 19, in which the antibody is for administration, simultaneously or sequentially in any order, with a second agent.

21. A composition for use according to Claim 18 or 20 or a use according to Claim 19 or 20 for use in which the subject has a solid tumor or a haematological cancer.