

Claims

1. A bispecific antibody comprising at least two binding portions, at least one of which binds to human CD38 and at least one of which binds to human CD47.
- 5 2. The bispecific antibody according to claim 1, comprising at least one binding portion which binds to human CD47 and at least two binding portions which bind to human CD38.
3. The bispecific antibody according to claim 2, wherein said at least two CD38 binding portions are monoparatopic.
4. The bispecific antibody according to claim 2, wherein said at least two CD38 binding portions are biparatopic.
- 10 5. The bispecific antibody according to any one of claims 1 to 4, wherein at least one of said binding portions which binds to human CD47 can also bind to cynomologus CD47.
6. The bispecific antibody according to any one of claims 1 to 5, wherein at least one of said binding portions which binds to human CD38 can also bind to cynomologus CD38.
- 15 7. The bispecific antibody according to any one of claims 1 to 6, for use as a medicament.
8. Use of the bispecific antibody according to any one of any one of claims 1 to 67, for use in the manufacture of a medicament for treating multiple myeloma, acute lymphoblastic leukemia, chronic lymphocytic leukemia, acute myeloid leukemia, lymphoma, breast cancer such as Her2+ breast cancer, prostate cancer, cervical cancer, germinal center B-cell lymphoma or B-cell acute lymphoblastic leukemia, Chronic lymphocytic leukemia (CLL), Myelodysplastic syndrome (MDS),
20 Non-Hodgkin lymphoma, diffuse large B-cell lymphoma, non small cell lung cancer (NSCLC), Hepatocellular carcinoma (HCC), High-grade serous ovarian carcinoma, peritoneal cancer.
9. The bispecific antibody according to any one of claims 1 to 68, the bispecific antibody for use according to claim 7 or the use according to claim 8, wherein said at least one binding portion which
25 binds to human CD38 comprises a CDR set selected from the group comprising: SEQ ID NO: 103, SEQ ID NO: 163, SEQ ID NO: 223; SEQ ID NO: 117, SEQ ID NO: 177, SEQ ID NO: 237; SEQ ID NO: 121; SEQ ID NO: 181, SEQ ID NO: 241.
10. The bispecific antibody according to any one of claims 1 to 67 or the bispecific antibody for use according to claim 7, wherein said at least one binding portion which binds to human CD47
30 comprises a CDR set comprising: SEQ ID NO: 75, SEQ ID NO: 135, SEQ ID NO: 195.

11. The bispecific antibody, the bispecific antibody for use or the use according to any one of the preceding claims, wherein said bispecific antibody comprises a Fc region.
12. The bispecific antibody, the bispecific antibody for use or the use according to claim 11, wherein said Fc region is a variant which comprises at least one amino acid modification relative to the Fc region of the parent antibody, whereas the antibody comprising the variant Fc region exhibits altered effector function compared to the parent antibody.
13. The bispecific antibody, the bispecific antibody for use or the use of any one of the preceding claims wherein said at least one binding portion which binds to human CD47 has an affinity to human CD47 lower than the affinity that said at least one binding portion which binds to human CD38 has to human CD38.
14. An epitope on the human CD38 extracellular domain which is bound by the bispecific antibody of any one of claims 1 to 13.
15. An epitope on the human CD47 extracellular domain which is bound by the bispecific antibody of any one of claims 1 to 13.
16. An isolated nucleic acid encoding the bispecific antibody of any one of claims 1 to 13.
17. A host cell comprising the isolated nucleic acid of claim 16.