

Claims

1. A binding agent comprising a binding domain that binds to OX40 (CD134), wherein the binding agent is selected from the group consisting of:

5 (a) a binding agent comprising a binding domain comprising

(a1) the heavy chain complementarity determining region HCDR1 having the amino acid sequence of SEQ ID NO: 1703, the HCDR2 having the amino acid sequence of SEQ ID NO: 1704 and the HCDR3 having the amino acid sequence of SEQ ID NO: 1705, and

10 the light chain complementarity determining region LCDR1 having the amino acid sequence of SEQ ID NO: 1706, the LCDR2 having the amino acid sequence of SEQ ID NO: 1707 and the LCDR3 having the amino acid sequence of SEQ ID NO: 1708; or

(a2) the VH having the amino acid sequence of SEQ ID NO: 1499 and the
15 VL having the amino acid sequence of SEQ ID NO: 1500;

(b) a binding agent comprising a binding domain comprising

(b1) the heavy chain complementarity determining region HCDR1 having the amino acid sequence of SEQ ID NO: 1709, the HCDR2 having the amino acid sequence of SEQ ID NO: 1710 and the HCDR3 having the amino acid sequence of SEQ ID NO: 1711, and

20 the light chain complementarity determining region LCDR1 having the amino acid sequence of SEQ ID NO: 1712, the LCDR2 having the amino acid sequence of SEQ ID NO: 1713 and the LCDR3 having the amino acid sequence of SEQ ID NO: 1714; or

(b2) the VH having the amino acid sequence of SEQ ID NO: 1501 and the
25 VL having the amino acid sequence of SEQ ID NO: 1502;

(c) a binding agent comprising a binding domain comprising

(c1) the heavy chain complementarity determining region HCDR1 having the amino acid sequence of SEQ ID NO: 1847, the HCDR2 having the amino acid sequence of SEQ ID NO: 1848 and the HCDR3 having the amino acid sequence of SEQ ID NO: 1849, and

30 the light chain complementarity determining region LCDR1 having the amino acid sequence of SEQ ID NO: 1850, the LCDR2 having the

amino acid sequence of SEQ ID NO: 1851 and the LCDR3 having the amino acid sequence of SEQ ID NO: 1852; or

(c2) the VH having the amino acid sequence of SEQ ID NO: 1547 and the VL having the amino acid sequence of SEQ ID NO: 1548; and

5 (d) a binding agent comprising a binding domain comprising

(d1) the heavy chain complementarity determining region HCDR1 having the amino acid sequence of SEQ ID NO: 2015, the HCDR2 having the amino acid sequence of SEQ ID NO: 2016 and the HCDR3 having the amino acid sequence of SEQ ID NO: 2017, and

10 the light chain complementarity determining region LCDR1 having the amino acid sequence of SEQ ID NO: 2018, the LCDR2 having the amino acid sequence of SEQ ID NO: 2019 and the LCDR3 having the amino acid sequence of SEQ ID NO: 2020; or

(d2) the VH having the amino acid sequence of SEQ ID NO: 1603 and the
15 VL having the amino acid sequence of SEQ ID NO: 1604.

2. The binding agent according to claim 1, wherein the binding agent is an agonistic binding agent.

20 3. The binding agent according to claim 1 or 2, wherein the binding agent is in the format of a full-length antibody.

4. The binding agent according to any one of claims 1 to 3, wherein the binding agent is in the format of a full-length IgG antibody.

25 5. The binding agent according to any one of claims 1 to 4, wherein the binding agent is a monoclonal antibody.

6. A binding agent binding to the same epitope(s) as a binding agent according to any
30 one of claims 1 to 5.

7. A nucleic acid molecule encoding a binding agent according to any one of claims 1 to 6, wherein the nucleic acid molecule is contained in a vector.

8. A cell comprising nucleic acids encoding the binding agent of any one of claims 1 to 6 or comprising the nucleic acid molecule according to claim 7.
- 5 9. A pharmaceutical composition comprising, as an active agent, a binding agent according to any one of claims 1 to 6, nucleic acids encoding the binding agent of any one of claims 1 to 6, the nucleic acid molecule according to claim 7, or a cell according to claim 8.
- 10 10. The pharmaceutical composition according to claim 9, further comprising a pharmaceutically acceptable carrier and/or excipient.
- 15 11. A kit comprising a binding agent according to any one of claims 1 to 6, nucleic acids encoding the binding agent of any one of claims 1 to 6, the nucleic acid molecule according to claim 7, a cell according to claim 8, or a pharmaceutical composition according to claim 9 or 10.
- 20 12. A binding agent according to any one of claims 1 to 6, a nucleic acid molecule according to claim 7, a cell according to claim 8, or a pharmaceutical composition according to claim 9 or 10 for use as a medicament.
- 25 13. A binding agent according to any one of claims 1 to 6, a nucleic acid molecule according to claim 7, a cell according to claim 8, or a pharmaceutical composition according to claim 9 or 10 for use in the treatment of a disease selected from the group consisting of cancer, infectious diseases, inflammatory diseases, metabolic diseases, autoimmune disorders, degenerative diseases, apoptosis-associated diseases and transplant rejections.
- 30 14. Use of a binding agent according to any one of claims 1 to 6, a nucleic acid molecule according to claim 7, a cell according to claim 8, or a pharmaceutical composition according to claim 9 or 10 in the preparation of a medicament for the treatment of a disease selected from the group consisting of cancer, infectious diseases, inflammatory diseases, metabolic diseases, autoimmune disorders, degenerative diseases, apoptosis-associated diseases and transplant rejections.