

CLAIMS

1. An isolated antibody that binds to OX40 or an antigen-binding portion thereof, wherein the isolated antibody or the antigen-binding portion thereof comprises:

- (a) a CDRH1 comprising or consisting of SEQ ID NO: 1;
- (b) a CDRH2 comprising or consisting of SEQ ID NO: 3;
- (c) a CDRH3 comprising or consisting of SEQ ID NO: 5;
- (d) a CDRL1 comprising or consisting of SEQ ID NO: 2;
- (e) a CDRL2 comprising or consisting of SEQ ID NO: 4; and
- (f) a CDRL3 comprising or consisting of SEQ ID NO: 6.

2. An isolated antibody that binds to OX40 or an antigen-binding portion thereof, wherein the isolated antibody or the antigen-binding portion thereof comprises:

- (a) a CDRH1 comprising or consisting of SEQ ID NO: 7;
- (b) a CDRH2 comprising or consisting of SEQ ID NO: 9;
- (c) a CDRH3 comprising or consisting of SEQ ID NO: 11;
- (d) a CDRL1 comprising or consisting of SEQ ID NO: 8;
- (e) a CDRL2 comprising or consisting of SEQ ID NO: 10; and
- (f) a CDRL3 comprising or consisting of SEQ ID NO: 12.

3. An isolated antibody that binds to OX40 or an antigen-binding portion thereof, wherein the isolated antibody or the antigen-binding portion thereof comprises:

- (a) a CDRH1 comprising or consisting of SEQ ID NO: 13;
- (b) a CDRH2 comprising or consisting of SEQ ID NO: 9;
- (c) a CDRH3 comprising or consisting of SEQ ID NO: 11;
- (d) a CDRL1 comprising or consisting of SEQ ID NO: 14;
- (e) a CDRL2 comprising or consisting of SEQ ID NO: 10; and
- (f) a CDRL3 comprising or consisting of SEQ ID NO: 12.

4. An isolated antibody that binds to OX40 or an antigen-binding portion thereof, wherein the isolated antibody or the antigen-binding portion thereof comprises:

- (a) a CDRH1 comprising or consisting of SEQ ID NO: 15;
- (b) a CDRH2 comprising or consisting of SEQ ID NO: 17;

- (c) a CDRH3 comprising or consisting of SEQ ID NO: 19;
 - (d) a CDRL1 comprising or consisting of SEQ ID NO: 16;
 - (e) a CDRL2 comprising or consisting of SEQ ID NO: 18; and
 - (f) a CDRL3 comprising or consisting of SEQ ID NO: 20.
5. An isolated antibody that binds to OX40 or an antigen-binding portion thereof, wherein the isolated antibody or the antigen-binding portion thereof comprises:
- (a) a CDRH1 comprising or consisting of SEQ ID NO: 21;
 - (b) a CDRH2 comprising or consisting of SEQ ID NO: 23;
 - (c) a CDRH3 comprising or consisting of SEQ ID NO: 25;
 - (d) a CDRL1 comprising or consisting of SEQ ID NO: 22;
 - (e) a CDRL2 comprising or consisting of SEQ ID NO: 24; and
 - (f) a CDRL3 comprising or consisting of SEQ ID NO: 26.
6. An isolated antibody that binds to OX40 or an antigen-binding portion thereof, wherein the isolated antibody or the antigen-binding portion thereof comprises:
- (a) a CDRH1 comprising or consisting of SEQ ID NO: 27;
 - (b) a CDRH2 comprising or consisting of SEQ ID NO: 29;
 - (c) a CDRH3 comprising or consisting of SEQ ID NO: 31;
 - (d) a CDRL1 comprising or consisting of SEQ ID NO: 28;
 - (e) a CDRL2 comprising or consisting of SEQ ID NO: 30; and
 - (f) a CDRL3 comprising or consisting of SEQ ID NO: 32.
7. The isolated antibody or the antigen-binding portion thereof of any one of claims 1 to 6, wherein the isolated antibody or the antigen-binding portion thereof comprises:
- (a) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 33 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 34; or
 - (b) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 35 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 36; or
 - (c) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 37 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 38; or
 - (d) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 39 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 40; or
 - (e) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 41 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 42; or

(f) a heavy chain variable region comprising the amino acid sequence of SEQ ID NO: 43 and a light chain variable region comprising the amino acid sequence of SEQ ID NO: 44.

8. The isolated antibody or the antigen-binding portion thereof of any one of claims 1 to 6, wherein the antibody is a monoclonal antibody.

9. The isolated antibody or the antigen-binding portion thereof of any one of claims 1 to 6, wherein the antibody is fused to a constant region of an IgG.

10. An isolated nucleic acid molecule, comprising a nucleic acid sequence encoding the heavy chain variable region and the light chain variable region of the isolated antibody of any one of claims 1 to 6.

11. A vector comprising the nucleic acid molecule of claim 10.

12. A host cell comprising the vector of claim 11.

13. A pharmaceutical composition comprising at least one antibody or antigen-binding portion thereof of any one of claims 1 to 6 and a pharmaceutically acceptable carrier.

14. A method for preparing antibody or antigen-binding portion thereof of any one of claims 1 to 6, comprising the steps of:

- expressing the antibody or antigen-binding portion thereof in the host cell of claim 12; and
- isolating the antibody or antigen-binding portion thereof from the host cell.

15. Use of the antibody or antigen-binding portion thereof of any one of claims 1 to 6 in the manufacture of a medicament for reducing tumor cell metastasis in a subject.

16. Use of the antibody or antigen-binding portion thereof of any one of claims 1 to 6 in the manufacture of a medicament for treating diseases comprising cancers in which OX40 is implicated, or infectious diseases in a subject.

17. A kit for treating or diagnosing cancers in which OX40 is implicated, or infectious diseases, comprising a container comprising at least one antibody or antigen-binding portion thereof of any one of claims 1 to 6.

18. The antibody or antigen-binding portion thereof of any one of claims 1 to 6 for use as a medicament.

19. The antibody or antigen-binding portion thereof of any one of claims 1 to 6 for use in reducing tumor cell metastasis in a subject.

20. The antibody or antigen-binding portion thereof of any one of claims 1 to 6 for use in treating diseases comprising cancers in which OX40 is implicated, or infectious diseases in a subject.