WHAT IS CLAIMED IS:

1. An antibody or an antigen-binding portion thereof binding to OX40 (CD134), comprising:

a heavy chain variable region and a light chain variable region respectively comprising an amino acid sequence of at least 95% sequence identity to the amino acid sequence selected from the group consisting of:

SEQ ID NO. 6 and amino acid 1-108 of SEQ ID NO. 5,

SEQ ID NO. 8 and 1-108 of SEQ ID NO. 7,

amino acid 128-246 of SEQ ID NO. 10 and 1-112 of SEQ ID NO. 10, and

amino acid 124-241 of SEQ ID NO. 13 and 1-108 of SEQ ID NO. 13;

wherein the at least about 95% sequence identity to the amino acid sequence excludes complementarity-determining regions (CDRs).

2. The antibody or the antigen-binding portion thereof of claim 1, wherein the antibody or the antigen-binding portion thereof is a single chain variable fragment (scFv) sequence selected from the group consisting of SEQ ID NOs. 10, 11, 12, and 13.

3. The antibody or the antigen-binding portion thereof of claim 1, wherein the antibody or the antigen-binding portion thereof is a bispecific antibody.

4. The antibody or the antigen-binding portion thereof of claim 3, wherein the bispecific antibody comprises an immune checkpoint protein binding site.

5. The antibody or the antigen-binding portion thereof of claim 4, wherein the immune checkpoint protein binding site comprises a programmed cell death protein 1 ligand (PD-L1) binding site, PD-1 binding site, epidermal growth factor receptor (EGFR) binding site, human epidermal growth factor receptor 2 (HER2) binding site, cytotoxic T-lymphocyte-associated antigen 4 (CTLA-4) binding site, or lymphocyte activation gene 3 (LAG3) binding site.

6. An antibody or an antigen-binding portion thereof binding to PD-L1, comprising:

a heavy chain variable domain and a light chain variable domain respectively comprising an amino acid sequence of at least 95% sequence identity to the amino acid sequence selected from the group consisting of:

SEQ ID NO. 2 and amino acid 1-111 of SEQ ID NO. 1; and

SEQ ID NO. 4 and amino acid 1-110 of SEQ ID NO. 3;

wherein the at least about 95% sequence identity to the amino acid sequence excludes CDRs.

7. A bispecific antibody comprising at least one of polypeptide chain, wherein the polypeptide chain comprises:

an OX40 binding site, comprising:

a heavy chain variable region and a light chain variable region respectively comprising an amino acid sequence of at least 95% sequence identity to the amino acid sequence selected from the group consisting of:

SEQ ID NO. 6 and amino acid 1-108 of SEQ ID NO. 5,

SEQ ID NO. 8 and 1-108 of SEQ ID NO. 7,

amino acid 128-246 of SEQ ID NO. 10 and 1-112 of SEQ ID NO. 10, and

amino acid 124-241 of SEQ ID NO. 13 and 1-108 of SEQ ID NO. 13;wherein the at least about 95% sequence identity to the amino acid sequence excludes CDRs; and

a PD-L1 binding site, comprising:

a heavy chain variable domain and a light chain variable domain respectively comprising an amino acid sequence of at least 95% sequence identity to the amino acid sequence selected from the group consisting of:

SEQ ID NO. 2 and amino acid 1-111 of SEQ ID NO. 1; and

SEQ ID NO. 4 and 1-110 of SEQ ID NO. 3;wherein the at least about 95% sequence identity to the amino acid sequence excludes CDRs.

8. The bispecific antibody of claim 7, wherein the polypeptide chain further comprises:

a Fc domain;

a Fab fragment connected to the N-terminus of the Fc domain, and the Fab fragment comprising the PD-L1 binding site; and

a scFv connected to the C-terminus of the Fc domain, and the scFv comprising the OX40 binding site.

9. The bispecific antibody of claim 8, wherein the polypeptide chain further comprises a linker between the Fc domain and the scFv.

10. The bispecific antibody of claim 9, wherein the scFv comprises an amino acid sequence selected from the group consisting of amino acid 455-707 of SEQ ID NO. 18, 455-708 of SEQ ID NO. 19, 455-701 of SEQ ID NO. 20,

455-706 of SEQ ID NO. 21, 455-706 of SEQ ID NO. 22, 455-706 of SEQ ID NO. 23, 455-706 of SEQ ID NO. 24, 455-706 of SEQ ID NO. 25, 455-706 of SEQ ID NO. 26, 455-706 of SEQ ID NO. 27, 455-706 of SEQ ID NO. 28, and 455-706 of SEQ ID NO. 29.

11. The bispecific antibody of claim 7, wherein the bispecific antibody comprises one pairs of polypeptide chains.

12. The bispecific antibody of claim 11, wherein the bispecific antibody is an IgG, IgE, IgM, IgD, IgA, or IgY antibody.

13. The bispecific antibody of claim 12, wherein the bispecific antibody is an IgG antibody.

14. The bispecific antibody of claim 13, wherein the IgG antibody is an IgG1, IgG2, IgG3, or IgG4 antibody.

15. An antibody-drug conjugate comprising:

a therapeutic agent; and

an antibody or an antigen-binding portion thereof according to any one of claims 1 to 6, or a bispecific antibody according to any one of claims 7 to 14.

16. A pharmaceutical composition comprising the antibody or the antigen-binding portion thereof according to claim 1, and at least one pharmaceutically acceptable carrier.

17. A pharmaceutical composition comprising the antibody or the antigen-binding portion thereof as claimed in claim 6, and at least one pharmaceutically acceptable carrier.

18. A pharmaceutical composition comprising the bispecific antibody according to claim 7, and at least one pharmaceutically acceptable carrier.

19. Use of the antibody or antigen-binding portion thereof as claimed in claim 1 for the manufacture of a medicament for the treatment of cancer, wherein the cancer is selected from the group consisting of prostate cancer, lung cancer, Non-Small Cell Lung Cancer (NSCLC), melanoma, lymphoma, breast cancer, head and neck cancer, renal cell carcinoma (RCC), and ovarian cancer.

20. Use of the antibody or antigen-binding portion thereof as claimed in claim 6 for the manufacture of a medicament for the treatment of cancer, wherein the cancer is selected from the group consisting of prostate cancer, lung cancer, Non-Small Cell Lung Cancer (NSCLC), melanoma, lymphoma, breast cancer, head and neck cancer, renal cell carcinoma (RCC), and ovarian cancer.

21. Use of the bispecific antibody as claimed in claim 7 for the manufacture of a medicament for the treatment of cancer, wherein the cancer is selected from

the group consisting of prostate cancer, lung cancer, Non-Small Cell Lung Cancer (NSCLC), melanoma, lymphoma, breast cancer, head and neck cancer, renal cell carcinoma (RCC), and ovarian cancer.

22. A nucleic acid molecule encoding the antibody or the antigen-binding portion thereof according to claim 1.

23. A nucleic acid molecule encoding the antibody or the antigen-binding portion thereof as claimed in claim 6.

24. A nucleic acid molecule encoding the bispecific antibody according to claim 7.