

CLAIMS

1. A bispecific antibody, comprising a first binding arm that binds human CD3 and a second binding arm that binds human MUC16, wherein the first binding arm comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 1961 and a light chain comprising the amino acid sequence of SEQ ID NO: 1960, and wherein the second binding arm comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 1959 and a light chain comprising the amino acid sequence of SEQ ID NO: 1960.

2. A bispecific antibody, comprising a first binding arm that binds human CD3 and a second binding arm that binds human MUC16, wherein the first binding arm comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 1962 and a light chain comprising the amino acid sequence of SEQ ID NO: 1960, and wherein the second binding arm comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 1959 and a light chain comprising the amino acid sequence of SEQ ID NO: 1960.

3. A bispecific antibody or antigen-binding fragment thereof comprising a first antigen-binding domain that specifically binds human CD3, and a second antigen-binding domain that specifically binds human MUC16, wherein the second antigen-binding domain comprises HCDR1, HCDR2, HCDR3, LCDR1, LCDR2, and LCDR3 domains, respectively, comprising the amino acid sequences of SEQ ID NOs: 20, 22, 24, 28, 30, and 32.

4. The bispecific antibody or antigen-binding fragment of claim 3, wherein the second antigen-binding domain comprises a heavy chain variable region (HCVR) comprising the amino acid sequence of SEQ ID NO: 18, and a light chain variable region (LCVR) comprising the amino acid sequence of SEQ ID NO: 26.

5. The bispecific antibody or antigen-binding fragment of claim 3 or 4, wherein the first antigen-binding domain comprises HCDR1, HCDR2, HCDR3, LCDR1, LCDR2, and LCDR3 domains, respectively, comprising amino acid sequences selected from the group consisting of SEQ ID NOs: 1732, 1734, 1736, 28, 30, and 32; 1764, 1766, 1768, 28, 30, and 32; 1780, 1782, 1784, 28, 30, and 32; 1788, 1790, 1792, 28, 30, and 32; and 1868, 1870, 1872, 28, 30, and 32.

6. The bispecific antibody or antigen-binding fragment of claim 5, wherein the first antigen-binding domain comprises a HCVR comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 1730, 1762, 1778, 1786, and 1866, and a LCVR comprising the amino acid sequence of SEQ ID NO: 26.

7. The bispecific antibody or antigen-binding fragment of claim 5, wherein the first antigen-binding domain comprises HCDR1, HCDR2, HCDR3, LCDR1, LCDR2, and LCDR3 domains, respectively, comprising the amino acid sequences of SEQ ID NOs: 1732, 1734, 1736, 28, 30, and 32.

8. The bispecific antibody or antigen-binding fragment of claim 5, wherein the first antigen-binding domain comprises HCDR1, HCDR2, HCDR3, LCDR1, LCDR2, and LCDR3 domains, respectively, comprising the amino acid sequences of SEQ ID NOs: 1868, 1870, 1872, 28, 30, and 32.

9. The bispecific antibody or antigen-binding fragment of claim 7, wherein the first antigen-binding domain comprises a HCVR comprising the amino acid sequence of SEQ ID NO: 1730 and a LCVR comprising the amino acid sequence of SEQ ID NO: 26, and wherein the second antigen-binding domain comprises a HCVR comprising the amino acid sequence of SEQ ID NO: 18 and a LCVR comprising the amino acid sequence of SEQ ID NO: 26.

10. The bispecific antibody or antigen-binding fragment of claim 8, wherein the first antigen-binding domain comprises a HCVR comprising the amino acid sequence of SEQ ID NO: 1866 and a LCVR comprising the amino acid sequence of SEQ ID NO: 26, and wherein the second antigen-binding domain comprises a HCVR comprising the amino acid sequence of SEQ ID NO: 18 and a LCVR comprising the amino acid sequence of SEQ ID NO: 26.

11. A pharmaceutical composition comprising the bispecific antibody or antigen-binding fragment of any one of claims 1-10, and a pharmaceutically acceptable carrier or diluent.

12. Use of the pharmaceutical composition of claim 11 in the manufacture of a medicament for treating a MUC16-expressing cancer in a subject.

13. The use of claim 12, wherein the cancer is selected from the group consisting of ovarian cancer, breast cancer, pancreatic cancer, non-small-cell lung cancer, intrahepatic cholangiocarcinoma-mass forming type, adenocarcinoma of the uterine cervix, and adenocarcinoma of the gastric tract.

14. The use of claim 13, wherein the cancer is ovarian cancer.

15. Use of the bispecific antibody or antigen-binding fragment of any one of claims 1-10 in the manufacture of a medicament for treating a MUC16-expressing cancer in a subject.

16. The use of claim 15, wherein the cancer is ovarian cancer.