CLAIMS

1. An antigen-binding polypeptide comprising at least one complementarity-determining region (CDR) of an antibody heavy chain variable region (VH), wherein the VH comprises an amino acid sequence set forth in SEQ ID NO: 25.

2. The antigen-binding polypeptide according to claim 1, wherein the VH comprises an amino acid sequence set forth in SEQ ID NO: 26, SEQ ID NO: 27, SEQ ID NO: 28, or SEQ ID NO: 29.

3. The antigen-binding polypeptide according to any one of claims 1-2, comprising a VH, wherein the VH comprises a heavy chain complementarity-determining region 1 (HCDR1), a heavy chain complementarity-determining region 2 (HCDR2), and a heavy chain complementarity-determining region 3 (HCDR3), wherein

the HCDR3 comprises an amino acid sequence set forth in SEQ ID NO: 7; or

the HCDR2 comprises an amino acid sequence set forth in SEQ ID NO: 4; or

the HCDR1 comprises an amino acid sequence set forth in SEQ ID NO: 1.

4. The antigen-binding polypeptide according to claim 3, wherein the VH comprises:

the HCDR1 comprising the amino acid sequence set forth in SEQ ID NO: 2 or SEQ ID NO: 3, the HCDR2 comprising the amino acid sequence set forth in SEQ ID NO: 5 or SEQ ID NO: 6, and,

the HCDR3 comprising the amino acid sequence set forth in SEQ ID NO: 8 or SEQ ID NO: 9.

5. The antigen-binding polypeptide according to any one of claims 3-4, wherein the VH comprises:

i) the HCDR1 comprising the amino acid sequence set forth in SEQ ID NO: 2, the HCDR2 comprising the amino acid sequence set forth in SEQ ID NO: 5, and the

HCDR3 comprising the amino acid sequence set forth in SEQ ID NO: 8; or

ii) the HCDR1 comprising the amino acid sequence set forth in SEQ ID NO: 3, the HCDR2 comprising the amino acid sequence set forth in SEQ ID NO: 6, and the HCDR3 comprising the amino acid sequence set forth in SEQ ID NO: 9.

6. The antigen-binding polypeptide according to claim 3, wherein the VH comprises a heavy chain framework region 1 (HFR1), a heavy chain framework region 2 (HFR2), a heavy chain framework region 3 (HFR3), and a heavy chain framework region 4 (HFR4), wherein

the HFR1 comprises an amino acid sequence set forth in SEQ ID NO: 10; or

the HFR2 comprises an amino acid sequence set forth in SEQ ID NO: 15; or

the HFR3 comprises an amino acid sequence set forth in SEQ ID NO: 18, or

the HFR4 comprises an amino acid sequence set forth in SEQ ID NO: 22.

7. The antigen-binding polypeptide according to claim 6, wherein the VH comprises HFR1, HFR2, HFR3, and HFR4, and the HFR1, HFR2, HFR3, and HFR4 are selected from:

i) the HFR1 comprising the amino acid sequence set forth in SEQ ID NO: 11, the HFR2 comprising the amino acid sequence set forth in SEQ ID NO: 16, the HFR3 comprising the amino acid sequence set forth in SEQ ID NO: 19, and the HFR4 comprising the amino acid sequence set forth in SEQ ID NO: 23;

ii) the HFR1 comprising the amino acid sequence set forth in SEQ ID NO: 12, the HFR2 comprising the amino acid sequence set forth in SEQ ID NO: 16, the HFR3 comprising the amino acid sequence set forth in SEQ ID NO: 20, and the HFR4 comprising the amino acid sequence set forth in SEQ ID NO: 24;

iii) the HFR1 comprising the amino acid sequence set forth in SEQ ID NO: 13, the HFR2 comprising the amino acid sequence set forth in SEQ ID NO: 17, the HFR3 comprising the amino acid sequence set forth in SEQ ID NO: 21, and the HFR4 comprising the amino acid sequence set forth in SEQ ID NO: 23; and

vi) the HFR1 comprising the amino acid sequence set forth in SEQ ID NO: 14, the

HFR2 comprising the amino acid sequence set forth in SEQ ID NO: 17, the HFR3 comprising the amino acid sequence set forth in SEQ ID NO: 20, and the HFR4 comprising the amino acid sequence set forth in SEQ ID NO: 24.

8. The antigen-binding polypeptide according to any one of claims 1-7, wherein the antigen-binding polypeptide comprises an antibody or an antigen-binding fragment thereof, wherein the antigen-binding fragment comprises a Fab fragment, an Fv fragment, $F(ab')_2$, a single-chain Fv (scFv), or a single-domain antibody (VHH).

9. A chimeric antigen receptor (CAR) comprising a targeting moiety, wherein the targeting moiety comprises the antigen-binding polypeptide according to any one of claims 1-8.

10. One or more isolated nucleic acid molecules encoding the antigen-binding polypeptide according to any one of claims 1-8 or the chimeric antigen receptor according to claim 9.

11. A vector comprising the isolated nucleic acid molecule according to claim 10.

12. A cell i) comprising the isolated nucleic acid molecule according to claim 10 or the vector according to claim 11; and/or ii) expressing the antigen-binding polypeptide according to any one of claims 1-8 or the chimeric antigen receptor according to claim 9.

13. An immune effector cell comprising the nucleic acid molecule according to claim 10 or the vector according to claim 11, and/or expressing the CAR according to claim 9.

14. The immune effector cell according to claim 13, wherein functions of a T cell antigen receptor (TCR) and major histocompatibility complexes (MHCI, MHCII) in the modified immune effector cell are inhibited in the T cell.

15. The immune effector cell according to any one of claims 13-14, wherein the immune effector cell is an HLA-B homozygous cell and/or an HLA-A homozygous or heterozygous cell.

16. A method for preparing an immune effector cell, comprising introducing the nucleic acid molecule according to claim 10 or the vector according to claim 11 into the immune effector cell.

17. Use of the chimeric antigen receptor according to claim 9, the isolated nucleic acid molecule according to claim 10, the vector according to claim 11, the cell according to claim 12, or the immune effector cell according to any one of claims 13-15 in the preparation of a CAR-T cell.

18. A pharmaceutical composition comprising the antigen-binding polypeptide according to any one of claims 1-8, the chimeric antigen receptor according to claim 9, the isolated nucleic acid molecule according to claim 10, the vector according to claim 11, the cell according to claim 12, and/or the immune effector cell according to any one of claims 13-15.

19. Use of the antigen-binding polypeptide according to any one of claims 1-8, the chimeric antigen receptor according to claim 9, the isolated nucleic acid molecule according to claim 10, the vector according to claim 11, the cell according to claim 12, and the immune effector cell according to any one of claims 13-15, and/or the pharmaceutical composition according to claim 18 in the treatment of a disease or disorder associated with the expression of B7H3.

20. Use of the antigen-binding polypeptide according to any one of claims 1-8, the chimeric antigen receptor according to claim 9, the isolated nucleic acid molecule according to claim 10, the vector according to claim 11, the cell according to claim 12, and the immune effector cell according to any one of claims 13-15, and/or the pharmaceutical composition according to claim 18 in the preparation of a medicament for treating cancer.