

What is claimed is:

1. An anti-B7H3 monoclonal antibody or an antigen-binding fragment thereof, comprising a heavy chain variable region and a light chain variable region, wherein:

the heavy chain variable region comprises a heavy chain CDR1 of SEQ ID NO: 29, a heavy chain CDR2 of SEQ ID NO: 30, and a heavy chain CDR3 of SEQ ID NO: 31; and the light chain variable region comprises a light chain CDR1 of SEQ ID NO: 32, a light chain CDR2 of SEQ ID NO: 33, and a light chain CDR3 of SEQ ID NO: 34.

2. The anti-B7H3 monoclonal antibody or the antigen-binding fragment thereof according to claim 1, wherein:

the heavy chain variable region has an amino acid sequence of SEQ ID NO: 1, and the light chain variable region has an amino acid sequence of SEQ ID NO: 2.

3. The anti-B7H3 monoclonal antibody or the antigen-binding fragment thereof according to claim 2, wherein the heavy chain variable region and the light chain variable region are humanized.

4. Use of the anti-B7H3 monoclonal antibody or the antigen-binding fragment thereof according to any one of claims 1 to 3 in preparation of a medication for treating a tumor.

5. A monoclonal antibody conjugate, comprising a monoclonal antibody and a conjugating part, wherein the monoclonal antibody is the anti-B7H3 monoclonal antibody or the antigen-binding fragment thereof according to any one of claims 1 to 3, and the conjugating part is selected from one or more of a radionuclide, a medication, a toxin, a cytokine, an enzyme, fluorescein, and biotin.

6. Use of the monoclonal antibody conjugate according to claim 5 in preparation of a medication for treating, and/or adjuvantly treating a tumor.

7. An expression vector, comprising a nucleic acid molecule encoding the anti-B7H3 monoclonal antibody or the antigen-binding fragment thereof according to any one of claims 1 to 3.

8. A pharmaceutical composition, comprising the anti-B7H3 monoclonal antibody or the antigen-binding fragment thereof according to any one of claims 1 to 3, and a pharmaceutical carrier.