Claims

1. A specific binding member which binds to lymphocyte-activation gene 3 (LAG-3), comprising a LAG-3 antigen-binding site located in an antibody CH3 domain of the specific binding member, wherein the LAG-3 binding site comprises the amino acid sequences WDEPWGED (SEQ ID NO: 1) and PYDRWVWPDE (SEQ ID NO: 3), and wherein the amino acid sequence WDEPWGED is located in the AB loop of the CH3 domain and the amino acid sequence PYDRWVWPDE is located in the EF loop of the CH3 domain.

2. A specific binding member according to claim 1, wherein the LAG-3 antigen-binding site further comprises one of the following sequences in the CD loop of the CH3 domain:

(i) SNGQPENNY (SEQ ID NOS 2, 8 and 18);
(ii) SNGQPEDNY (SEQ ID NO: 13);
(iii) SNGYPEIEF (SEQ ID NO: 23);
(iv) SNGIPEWNY (SEQ ID NO: 28);
(v) SNGYAEYNY (SEQ ID NO: 33);
(vi) SNGYKEENY (SEQ ID NO: 38);
(vii) SNGVPELNV (SEQ ID NO: 43); or
(viii) SNGYQEDNY (SEQ ID NO: 48).

3. A specific binding member according to claim 2, wherein the LAG-3 antigen-binding site comprises the amino acid sequence set forth in SEQ ID NO: 2 in the CD loop of the CH3 domain.

4. A specific binding member according to any one of claims 1 to 3, wherein the specific binding member comprises the CH3 domain set forth in SEQ ID NO: 5, 10, 15, 20, 25, 30, 35, 40, 45, or 50.

5. A specific binding member according to claim 4, wherein the specific binding member comprises the CH3 domain set forth in SEQ ID NO: 5.

6. A specific binding member according to any one of claims 1 to 5, wherein the specific binding member further comprises an antibody CH2 domain.

7. A specific binding member according to claim 6, wherein the CH2 domain has the sequence set forth in SEQ ID NO: 53 or SEQ ID NO: 54.

8. A specific binding member according to any one of claims 1 to 7, wherein the specific binding member comprises the sequence set forth in SEQ ID NO: 6, 7, 11, 12, 16, 17, 21, 22, 26, 27, 31, 32, 36, 37, 41, 42, 46, 47, 51, or 52.

9. A specific binding member according to claim 8, wherein the specific binding member comprises the sequence set forth in SEQ ID NO: 6 or 7.

10. A specific binding member according to claim 6 or 7 further comprising an immunoglobulin hinge region, or part thereof, at the N-terminus of the CH2 domain.

11. A specific binding member according to claim 10, wherein the hinge region or part thereof has the sequence set forth in SEQ ID NO:57 or SEQ ID NO:58.

12. A specific binding member according to any one of claims 1 to 11, wherein the specific binding member further comprises a CDR-based antigen-binding site and is an antibody molecule.

13. An antibody molecule according to claim 12, wherein the CDR-based antigen-binding site of the antibody molecule binds to a molecule which is an immune system modulator.

14. A nucleic acid encoding a specific binding member or antibody molecule according to any one of claims 1 to 13, or a vector comprising a nucleic acid encoding a specific binding member or antibody molecule according to any one of claims 1 to 13.

15. A recombinant host cell comprising the nucleic acid or vector of claim 14.

16. A method of producing a specific binding member or antibody molecule according to any one of claims 1 to 13, comprising culturing the recombinant host cell of claim 15 under conditions for production of the specific binding member or antibody molecule, optionally further comprising isolating and/or purifying the specific binding member or antibody molecule.

17. A pharmaceutical composition comprising a specific binding member or antibody molecule according to any one of claims 1 to 13 and a pharmaceutically acceptable excipient.

18. A pharmaceutical composition for treating cancer in a patient, comprising an antibody molecule according to any one of claims 12 to 13**.**