Claims:

1. An antibody or an antigen-binding fragment thereof that binds to SLAMF6, said antibody or antigen binding fragment comprising a heavy chain variable region comprising:

a CDR-H1 sequence comprising SEQ ID NO: 5;

a CDR-H2 sequence comprising SEQ ID NO: 6 or SEQ ID NO:15; and

a CDR-H3 sequence comprising SEQ ID NO: 7.

2. The antibody or antigen-binding fragment according to claim 1, further comprising a light chain variable region comprising at least one CDR sequence selected from the group consisting of:

a CDR-L1 sequence comprising a sequence selected from the group consisting of SEQ ID NO: 8, and SEQ ID NO:16;

a CDR-L2 sequence comprising a sequence selected from the group consisting of SEQ ID NO: 9 and SEQ ID NO:17; and

a CDR-L3 sequence comprising SEQ ID NO: 10.

3. The antibody, or antigen-binding fragment, according to claim 1 or claim 2, wherein the heavy chain variable region comprises:

CDR-L1 comprising the sequence of SEQ ID NO: 5;

CDR-L2 comprising the sequence of SEQ ID NO: 15; and

CDR-L3 comprising the sequence of SEQ ID NO: 7.

4. The antibody, or antigen-binding fragment, according to claim 2 or claim 3, wherein the light chain variable region comprises:

CDR-L1 comprising the sequence of SEQ ID NO: 16;

CDR-L2 comprising the sequence of SEQ ID NO: 17; and

CDR-L3 comprising the sequence of SEQ ID NO: 10.

5. An antibody, or an antigen-binding fragment thereof, that binds to SLAMF6, said antibody or antigen binding fragment comprising:

a heavy chain variable region comprising:

a CDR-H1 comprising SEQ ID NO: 5;

a CDR-H2 comprising SEQ ID NO: 15; and

a CDR-H3 comprising SEQ ID NO: 7; and

a light chain variable region comprising:

a CDR-L1 comprising SEQ ID NO: 16;

a CDR-L2 comprising SEQ ID NO: 17; and

a CDR-L3 comprising SEQ ID NO: 10;

or a variant thereof, wherein said variant has i) independently 1, 2, 3, 4, 5, or 6, amino acid substitutions, additions and/or deletions in any one or more of said CDR-H1, said CDR-H2, said CDR-H3, said CDR-L1, said CDR-L2 and said CDR-L3; or ii) collectively 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10 amino acid substitutions, additions and/or deletions in the set of CDRs comprising said CDR-H1, said CDR-H2, said CDR-H3, said CDR-L1, said CDR-L2 and said CDR-L3.

6. An antibody, or an antigen-binding fragment thereof, said antibody or antigen binding fragment comprising:

i) the 3 heavy chain CDRs of SEQ ID NO:l and the 3 light chain CDRs of SEQ ID NO: 2 or

ii) the 3 heavy chain CDRs of SEQ ID NO:13 and the 3 light chain CDRs of SEQ ID NO: 14; wherein the CDRs are defined by the Kabat or by the Chothia numbering system.

7. An antibody, or an antigen-binding fragment thereof, comprising:

a heavy chain variable region comprising a sequence that is at least about 80%, 85%, 90%, 91%, 92%, 93%, 94%, 95% 96% 97% 98% or 99% identical to SEQ ID NO: 13 and

a light chain variable region comprising a sequence that is at least about 80%, 85%, 90%, 91%, 92%, 93%, 94%, 95% 96% 97% 98% or 99% identical to SEQ ID NO: 14.

8. The antibody, or an antigen-binding fragment thereof according to claim 7, comprising a heavy chain variable region comprising SEQ ID NO: 13, and a light chain variable region comprising SEQ ID NO: 14.

9. An antibody, or an antigen binding fragment thereof, which binds to an epitope on a SLAMF6 protein recognized by an antibody or antigen binding fragment according to any one of claims 1-8, or which cross-competes for binding with an antibody according to any one of claims 1-8.

10. The antibody, or antigen binding fragment thereof according to claim 9 which retains at least about 80%, at least about 85%, at least about 90%, at least about 91%, at least about 92%, at least about 93%, at least about 94%, at least about 95%, at least about 96%, at least about 97%, at least about 98% or at least about 99%, of the binding affinity for human SLAMF6 of the antibody or antigen binding fragment according to any one of claims 1-8.

11. The antibody, or antigen-binding fragment thereof, according to any preceding claim, wherein the antibody or antigen binding fragment is a monoclonal antibody.

12. The antibody, or antigen-binding fragment thereof, according to any preceding claim, wherein the antibody or antigen binding fragment is a chimeric, humanized, bispecific, or human antibody or antigen binding fragment.

13. The antibody, or antigen-binding fragment thereof, according to any preceding claim, wherein the antibody or antigen-binding fragment is an Fc silenced engineered IgGl antibody or antigen-binding fragment having reduced or no binding to one or more Fc receptors.

14. The antibody, or antigen-binding fragment thereof, according to any preceding claim, wherein the antibody or antigen-binding fragment is capable of inducing and/or enhancing T-cell cytotoxicity.

15. The antibody, or antigen-binding fragment thereof, according to any preceding claim, wherein the antigen-binding fragment is selected from the group consisting of: Fab, Fab', F(ab)2, F(ab')2, Fv, FV-TCR fragment, scFv, and single-domain antibody.

16. A polynucleotide encoding:

i) a heavy chain variable region of an antibody or antigen-binding fragment according to any preceding claim; and/or

ii) a light chain variable region of an antibody or antigen-binding fragment according to any preceding claim.

17. An expression vector comprising at least one polynucleotide according to claim 16.

18. A host cell comprising:

i. An expression vector comprising the polynucleotide according to claim 16; or ii. A first expression vector comprising a polynucleotide encoding the heavy chain variable region of an antibody or an antigen-binding portion thereof according to claim 16 and a second expression vector comprising a polynucleotide encoding the light chain variable region of the antibody or an antigen-binding portion thereof according to claim 16.

19. A method of making an antibody, or an antigen-binding fragment thereof, the method comprising culturing a host cell according to claim 18 under conditions wherein the antibody, or the antigen-binding fragment, is expressed in the host cell, and optionally isolating the antibody or antigen-binding fragment.

20. A pharmaceutical composition comprising the antibody, or antigen-binding fragment thereof, according to any one of claims 1-15 and a pharmaceutically acceptable carrier.

21. Use of an antibody or antigen-binding fragment thereof or a pharmaceutical composition according to any one of claims 1-15 or 20 in the manufacture of a medicament for use in the treatment of cancer.

22. An antibody or antigen-binding fragment thereof or a pharmaceutical composition according to any one of claims 1-15 or 29 for use in the treatment of cancer.

23. The use according to any one of claims 20-22, wherein said cancer is selected from the group consisting of small cell lung cancer, non-small cell lung cancer (including squamous carcinomas and adenocarcinomas) skin cancer, including melanoma, breast cancer (including TNBC), colorectal cancer, gastric cancer, ovarian cancer, cervical cancer, prostate cancer, kidney cancer, liver cancer including hepatocellular carcinoma, pancreatic cancer, head and neck cancer, nasopharyngeal cancer, oesophageal cancer, bladder cancer and other uroepithelial cancers, stomach cancer, glioma, glioblastoma, testicular cancer, thyroid cancer, bone cancer, gallbladder and bile ducts cancers, uterine cancer, adrenal cancers, sarcomas, GIST, neuroendocrine tumours and haematological malignancies.

24. The use according to any one of claims 20-23, wherein the pharmaceutical composition or medicament further comprises an effective amount of a second therapeutic agent.

25. An antibody or antigen-binding fragment thereof or a pharmaceutical composition according to any one of claims 1-15 or 20 for use in therapy or for use as a medicament.