Claims

1. An antigen binding protein which is capable of binding Lymphocyte Activation Gene 3 (LAG-3) and which comprises CDRL1, CDRL2 and CDRL3 from SEQ ID No. 5 and CDRH1, CDRH2 and CDRH3 from SEQ ID NO. 10.

2. An antigen binding protein according to claim 1, which comprises the following CDRs:

   CDRL1: SEQ ID NO. 1

   CDRL2: SEQ ID NO. 2

   CDRL3: SEQ ID NO. 3

   CDRH1: SEQ ID NO. 6

   CDRH2: SEQ ID NO. 7

   CDRH3: SEQ ID NO. 8

3. An antigen binding protein according to claim 1 or 2, which comprises a) the variable light chain (VL) of SEQ ID NO. 4 and b) the variable heavy chain (VH) of SEQ ID No. 9.

4. An antigen binding protein according to any of claims 1 to 3, wherein the antigen binding protein is capable of binding LAG-3 expressed on activated T-cells.

5. An antigen binding protein according to any of claims 1 to 4, wherein the antigen binding protein is capable of depleting LAG-3+ activated human T cells.

6. An antigen binding protein according to any of claims 1 to 5, wherein the antigen binding protein is a humanised antibody.

7. A humanised antibody according to claim 6, wherein the humanised antibody comprises a human IgG1 constant region.

8. A humanised antibody according to claim 7, which comprises a) a light chain sequence with at least 97% identity to SEQ ID NO. 5, and b) a heavy chain sequence with at least 97% identity to SEQ ID NO. 10, wherein the humanised antibody comprises CDRL1, CDRL2 and CDRL3 from SEQ ID No. 5 and CDRH1, CDRH2 and CDRH3 from SEQ ID NO. 10.

9. A humanised antibody according to claim 8, which comprises a) a light chain sequence of SEQ ID NO. 5, and b) a heavy chain sequence of SEQ ID NO. 10.

10. A humanised antibody according to any of claims 7 to 9, which is non-fucosylated.

11. A humanised antibody comprising the variable light chain (VL) of SEQ ID NO. 4 and the variable heavy chain (VH) of SEQ ID NO. 9, wherein the antibody does not comprise fucose on the core carbohydrate structure attached to Asn297.

12. An isolated nucleic acid molecule which encodes an antigen binding protein according to any of claims 1 to 6 or a humanised antibody according to any of claims 7 to 11.

13. An expression vector comprising a nucleic acid molecule according to claim 12.

14.A host cell comprising an expression vector according to claim 13.

15.A host cell comprising an expression vector according to claim 13, wherein the FUT8 gene encoding alpha-1,6-fucosyltransferase has been inactivated in the host cell.

16.An antigen binding protein according to any of claims 1 to 6 or a humanised antibody according to any of claims 7 to 11 as produced by the host cell of claim 14 or 15.

17.A method of producing an antigen binding protein according to any of claims 1 to 6 or a humanised antibody according to any of claims 7 to 11, comprising a) culturing a host cell according to claim 14 under conditions suitable to express the antigen binding protein or antibody and b) isolating the antigen binding protein or antibody.

18. A method of producing a humanised antibody according to claim 10 or 11, comprising a) culturing a host cell according to claim 15 under conditions suitable to express the antigen binding protein or antibody, wherein the FUT8 gene encoding alpha-1,6-fucosyltransferase has been inactivated in the recombinant host cell, and b) isolating the antibody.

19.A pharmaceutical composition comprising a) an antigen binding protein according to any of claims 1 to 6 or an antibody according to any of claims 7 to 11, and b) a pharmaceutically acceptable carrier.

20.An antigen binding protein as defined in any of claims 1 to 6 or a humanised antibody as defined in any of claims 7 to 11, for use in therapy.

21.An antigen binding protein as defined in any of claims 1 to 6 or a humanised antibody as defined in any of claims 7 to 11 for use in the treatment of an autoimmune disease selected from the group consisting of psoriasis, Crohn's disease, rheumatoid arthritis, primary biliary cirrhosis, systemic lupus erythematosus (SLE), Sjogren's syndrome, multiple sclerosis, ulcerative colitis and autoimmune hepatitis.

22.Use of an antigen binding protein as defined in any of claims 1 to 6 or a humanised antibody as defined in any of claims 7 to 11 in the manufacture of a medicament for the treatment of an autoimmune disease selected from the group consisting of psoriasis, Crohn's disease, rheumatoid arthritis, primary biliary cirrhosis, systemic lupus erythematosus (SLE), Sjogren's syndrome, multiple sclerosis, ulcerative colitis and autoimmune hepatitis.