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We Claim:

1. An antibody that binds human IL-34 wherein the antibody comprises a heavy chain variable region (VH) and a light chain variable region (VL), wherein the VH comprises heavy chain complementarity determining regions (HCDR) HCDR1, HCDR2, and HCDR3, and the VL comprises light chain complementarity determining regions (LCDR) LCDR1, LCDR2, and LCDR3, wherein
 - the HCDR1 comprises SEQ ID NO: 5,
 - the HCDR2 comprises SEQ ID NO: 6,
 - the HCDR3 comprises SEQ ID NO: 7,
 - the LCDR1 comprises SEQ ID NO: 8,
 - the LCDR2 comprises SEQ ID NO: 9, and
 - the LCDR3 comprises SEQ ID NO: 10.
2. The antibody of claim 1, wherein the VH comprises SEQ ID NO: 3 and the VL comprises SEQ ID NO: 4.
3. The antibody of claim 1 or 2, wherein the antibody comprises a heavy chain (HC) comprising SEQ ID NO: 1 and a light chain (LC) comprising SEQ ID NO: 2.
4. An antibody that binds human IL-34 comprising a VH and a VL, wherein the VH comprises HCDR1, HCDR2, and HCDR3, and the VL comprises LCDR1, LCDR2, and LCDR3, wherein
 - the HCDR1 comprises SEQ ID NO: 15,
 - the HCDR2 comprises SEQ ID NO: 16,
 - the HCDR3 comprises SEQ ID NO: 17,
 - the LCDR1 comprises SEQ ID NO: 8,
 - the LCDR2 comprises SEQ ID NO: 9, and
 - the LCDR3 comprises SEQ ID NO: 10.

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5. The antibody of claim 4, wherein the VH comprises SEQ ID NO: 14 and the VL comprises SEQ ID NO: 4.
6. The antibody of claim 4 or 5, wherein the antibody comprises a HC comprising SEQ ID NO: 13 and a LC comprising SEQ ID NO: 2.
7. An antibody that binds murine IL-34 wherein the antibody comprises a VH and a VL, wherein the VH comprises HCDR1, HCDR2, and HCDR3, and the VL comprises LCDR1, LCDR2, and LCDR3, wherein
- 10 the HCDR1 comprises SEQ ID NO: 23,
 the HCDR2 comprises SEQ ID NO: 24,
 the HCDR3 comprises SEQ ID NO: 25,
 the LCDR1 comprises SEQ ID NO: 26,
 the LCDR2 comprises SEQ ID NO: 27, and
- 15 the LCDR3 comprises SEQ ID NO: 28.
8. The antibody of claim 7, wherein the VH comprises SEQ ID NO: 21 and the VL comprises SEQ ID NO: 22.
- 20 9. The antibody of claim 7 or 8, wherein the antibody comprises a HC comprising SEQ ID NO: 19 and a LC comprising SEQ ID NO: 20.
10. A nucleic acid comprising a sequence encoding a SEQ ID NO selected from one or more of the group consisting of: 11, 12, 18, 29, and 30.
- 25 11. A vector comprising the nucleic acid of claim 10.
12. The vector of claim 11, wherein the vector comprises a first nucleic acid sequence encoding SEQ ID NO: 11 or 18, and a second nucleic acid sequence encoding SEQ ID
- 30 NO: 12.

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13. The vector of claim 11, wherein the vector comprises a first nucleic acid sequence encoding SEQ ID NO: 29, and a second nucleic acid sequence encoding SEQ ID NO: 30.

5 14. A composition comprising a first vector comprising a nucleic acid sequence encoding SEQ ID NO: 11 or 18, and a second vector comprising a nucleic acid sequence encoding SEQ ID NO: 12.

10 15. A composition comprising a first vector comprising a nucleic acid sequence encoding SEQ ID NO: 29, and a second vector comprising a nucleic acid sequence encoding SEQ ID NO: 30.

16. A cell comprising the vector of claim 12 or 13.

15 17. A cell comprising a first vector comprising a nucleic acid sequence encoding SEQ ID NO: 11 or 18, and a second vector comprising a nucleic acid sequence encoding SEQ ID NO: 12.

20 18. A cell comprising a first vector comprising a nucleic acid sequence encoding SEQ ID NO: 29, and a second vector comprising a nucleic acid sequence encoding SEQ ID NO: 30.

19. The cell of any one of claims 16-18, wherein the cell is a mammalian cell.

25 20. A process of producing an antibody comprising culturing the cell of any one of claims 16-19 under conditions such that the antibody is expressed and recovering the expressed antibody from the culture medium.

21. An antibody produced by the process of claim 20.

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22. A pharmaceutical composition comprising the antibody of any one of claims 1-9 or 21, and a pharmaceutically acceptable excipient, diluent or carrier.

23. A method of treating an immune-mediated disease in a subject in need thereof,
5 comprising administering to the subject a therapeutically effective amount of the antibody of any one of claims 1-9 or 21, or the pharmaceutical composition of claim 22.

24. The method of claim 23, wherein the immune-mediated disease is selected from the group consisting of Alzheimer's Disease; a tauopathy disease; Sjogren's syndrome (SS);
10 Rheumatoid arthritis (RA); inflammatory bowel disease (IBD), atopic dermatitis, kidney disease, sepsis, and/or non-alcoholic fatty liver disease (NAFLD).

25. The method of claim 23, wherein the immune-mediated disease is Alzheimer's Disease.
15

26. The antibody of any one of claims 1-9 or 21 for use in therapy.

27. The antibody of any one of claims 1-9 or 21, or the pharmaceutical composition of claim 22, for use in the treatment of an immune-mediated disease.
20

28. The antibody or pharmaceutical composition of claim 27, wherein the an immune-mediated disease is selected from the group consisting of Alzheimer's Disease; a tauopathy disease; Sjogren's syndrome (SS); Rheumatoid arthritis (RA); inflammatory bowel disease (IBD), atopic dermatitis, kidney disease, sepsis, and/or non-alcoholic fatty
25 liver disease (NAFLD).

29. The antibody or pharmaceutical composition of claim 27, wherein the immune-mediated disease is Alzheimer's Disease.

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30. Use of the antibody of any one of claims 1-9 or 21, in the manufacture of a medicament for the treatment of an immune-mediated disease.

31. The use of claim 30, wherein the immune-mediated disease is selected from the group consisting of Alzheimer's Disease; a tauopathy disease; Sjogren's syndrome (SS); Rheumatoid arthritis (RA); inflammatory bowel disease (IBD), atopic dermatitis, kidney disease, sepsis, and/or non-alcoholic fatty liver disease (NAFLD).

32. The use of claim 30, wherein the immune-mediated disease is Alzheimer's Disease.

33. A method of determining the human IL-34 level in a bodily fluid comprising:

- (a) contacting the bodily fluid with an anti-human IL-34 diagnostic monoclonal antibody, or antigen-binding fragment thereof, that specifically binds to human IL-34 consisting of the amino acid sequence as in SEQ ID NO: 41, the antibody, or antigen-binding fragment thereof, comprising: light chain complementarity determining regions LCDR1, LCDR2, and LCDR3 comprising the amino acid sequences (SEQ ID NO: 8), (SEQ ID NO: 9), and (SEQ ID NO: 10), respectively, and heavy chain complementarity determining regions HCDR1, HCDR2, and HCDR3 comprising the amino acid sequences (SEQ ID NO: 15), (SEQ ID NO: 16), and (SEQ ID NO: 17), respectively;
- (b) optionally, removing any non-specifically bound monoclonal antibody or, antigen-binding fragment thereof; and
- (c) detecting and/or quantifying the amount of monoclonal antibody, or antigen-binding fragment thereof, which is specifically bound to human IL-34.

34. The method of claim 33, wherein said bodily fluid is blood, serum or plasma, or cerebrospinal fluid, and said contacting occurs *ex vivo*.