

WHAT IS CLAIMED IS:

1. ~~An antibody, comprising a heavy chain and a light chain, wherein the heavy chain comprises a heavy chain variable (VH) region and a heavy chain constant region, and the light chain comprises a light chain variable (VL) region;~~

~~wherein the VL region comprises a VL complementary determining region (CDR) 1, a VL CDR2, and a VL CDR3, and wherein the VH region comprises a VH CDR1, a VH CDR2, and a VH CDR3;~~

~~wherein the VL CDR1 comprises SEQ ID NO: 1;~~

~~wherein the VL CDR2 comprises SEQ ID NO: 2;~~

~~wherein the VL CDR3 comprises SEQ ID NO: 3;~~

~~wherein the VH CDR1 comprises SEQ ID NO: 4;~~

~~wherein the VH CDR2 comprises SEQ ID NO: 5;~~

~~wherein the VH CDR3 comprises SEQ ID NO: 6;~~

~~wherein the heavy chain constant region comprises an IgG4 constant region, wherein amino acid residue 308 of the heavy chain constant region corresponding to SEQ ID NO: 28 is Leu, and amino acid residue 314 of the heavy chain constant region corresponding to SEQ ID NO: 28 is Ser;~~

~~and wherein the antibody specifically binds activated C1s.~~

2. ~~The antibody of claim 1, wherein amino acid residue 108 of the heavy chain constant region corresponding to SEQ ID NO: 28 is Pro.~~

3. ~~The antibody of claim 1 or 2, wherein amino acid residue 115 of the heavy chain constant region corresponding to SEQ ID NO: 28 is Glu.~~

4. ~~An antibody, comprising a heavy chain and a light chain, wherein the heavy chain comprises a heavy chain variable (VH) region and a heavy chain constant region, and the light chain comprises a light chain variable (VL) region;~~

~~wherein the VL region comprises a VL complementary determining region (CDR) 1, a VL CDR2, and a VL CDR3, and wherein the VH region comprises a VH CDR1, a VH CDR2, and a VH CDR3;~~

~~wherein the VL CDR1 comprises SEQ ID NO: 1;~~

~~wherein the VL CDR2 comprises SEQ ID NO: 2;~~

~~wherein the VL CDR3 comprises SEQ ID NO: 3;~~
~~wherein the VH CDR1 comprises SEQ ID NO: 4;~~
~~wherein the VH CDR2 comprises SEQ ID NO: 5;~~
~~wherein the VH CDR3 comprises SEQ ID NO: 6;~~
~~wherein the heavy chain constant region comprises SEQ ID NO: 28;~~
~~and wherein the antibody specifically binds activated C1s.~~

5. ~~The antibody of any one of claims 1 to 4, wherein the VL region comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 20, 22, and 24.~~

6. ~~The antibody of any one of claims 1 to 5, wherein the VH region comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 10, 12, 14, 16, and 18.~~

7. ~~The antibody of any one of claims 1 to 6, wherein:~~

- ~~(a) the VH region comprises SEQ ID NO:10, and the VL region comprises SEQ ID NO:20;~~
- ~~(b) the VH region comprises SEQ ID NO:10, and the VL region comprises SEQ ID NO:22;~~
- ~~(c) the VH region comprises SEQ ID NO:10, and the VL region comprises SEQ ID NO:24;~~
- ~~(d) the VH region comprises SEQ ID NO:12, and the VL region comprises SEQ ID NO:20;~~
- ~~(e) the VH region comprises SEQ ID NO:12, and the VL region comprises SEQ ID NO:22;~~
- ~~(f) the VH region comprises SEQ ID NO:12, and the VL region comprises SEQ ID NO:24;~~
- ~~(g) the VH region comprises SEQ ID NO:14, and the VL region comprises SEQ ID NO:20;~~
- ~~(h) the VH region comprises SEQ ID NO:14, and the VL region comprises SEQ ID NO:22;~~
- ~~(i) the VH region comprises SEQ ID NO:14, and the VL region comprises SEQ ID NO:24;~~
- ~~(j) the VH region comprises SEQ ID NO:16, and the VL region comprises SEQ ID NO:20;~~
- ~~(j) the VH region comprises SEQ ID NO:16, and the VL region comprises SEQ ID NO:22;~~
- ~~(k) the VH region comprises SEQ ID NO:16, and the VL region comprises SEQ ID NO:24;~~
- ~~(l) the VH region comprises SEQ ID NO:18, and the VL region comprises SEQ ID NO:20;~~
- ~~(m) the VH region comprises SEQ ID NO:18, and the VL region comprises SEQ ID NO:22;~~

~~or~~

- ~~(n) the VH region comprises SEQ ID NO:18, and the VL region comprises SEQ ID NO:24.~~

8. ~~The antibody of any one of claims 1 to 7, wherein the VH region comprises SEQ ID NO:14, and the VL region comprises SEQ ID NO:22.~~

9. — ~~The antibody of any one of claims 1 to 8, wherein the light chain further comprises a light chain constant region.~~

10. — ~~The antibody of claim 9, wherein the light chain constant region comprises SEQ ID NO: 45.~~

11. — ~~The antibody of any one of claims 1 to 10, where the heavy chain comprises SEQ ID NO: 29.~~

12. — ~~The antibody of any one of claims 1 to 11, wherein the light chain comprises SEQ ID NO: 30.~~

13. — ~~The antibody of any one of claims 1 to 12, which is a bispecific antibody or a multispecific antibody.~~

14. — ~~An immunoconjugate comprising the antibody of any one of claims 1 to 13.~~

15. — ~~A nucleotide of a set of nucleotides encoding the antibody of any one of claims 1 to 13.~~

16. — ~~A vector or a set of vectors comprising the nucleotide of the set of nucleotides of claim 15.~~

17. — ~~A host cell comprising the nucleotide of the set of nucleotides of claim 15 or the vector or the set of vectors of claim 16.~~

18. — ~~A pharmaceutical composition comprising the antibody of any one of claims 1 to 13, the immunoconjugate of claim 14, the nucleotide or the set of nucleotides of claim 15, the vector or the set of vectors of claim 16, or the host cell of claim 17, and a pharmaceutically acceptable excipient.~~

19. — ~~A method of inhibiting a complement pathway in a subject in need thereof, comprising administering to the subject a pharmaceutically effective amount of the antibody of any one of claims 1 to 13, the immunoconjugate of claim 14, the nucleotide or the set of nucleotides of~~

~~claim 15, the vector or the set of vectors of claim 16, or the host cell of claim 17, or the pharmaceutical composition of claim 18.~~

~~20. A method of treating a complement-mediated disease or disorder in a subject in need thereof, comprising administering to the subject a pharmaceutically effective amount of the antibody of any one of claims 1 to 13, the immunoconjugate of claim 14, the nucleotide or the set of nucleotides of claim 15, the vector or the set of vectors of claim 16, or the host cell of claim 17, or the pharmaceutical composition of claim 18.~~

1. An antibody, comprising a heavy chain and a light chain, wherein the heavy chain comprises a heavy chain variable (VH) region and a heavy chain constant region, and the light chain comprises a light chain variable (VL) region;

wherein the VL region comprises a VL complementary determining region (CDR) 1, a VL CDR2, and a VL CDR3, and wherein the VH region comprises a VH CDR1, a VH CDR2, and a VH CDR3;

wherein the VL CDR1 comprises SEQ ID NO: 1;

wherein the VL CDR2 comprises SEQ ID NO: 2;

wherein the VL CDR3 comprises SEQ ID NO: 3;

wherein the VH CDR1 comprises SEQ ID NO: 4;

wherein the VH CDR2 comprises SEQ ID NO: 5;

wherein the VH CDR3 comprises SEQ ID NO: 6;

wherein the heavy chain constant region comprises an IgG4 constant region, wherein amino acid residue 308 of the heavy chain constant region corresponding to SEQ ID NO: 28 is Leu, and amino acid residue 314 of the heavy chain constant region corresponding to SEQ ID NO: 28 is Ser;

and wherein the antibody specifically binds activated C1s.

2. The antibody of claim 1, wherein amino acid residue 108 of the heavy chain constant region corresponding to SEQ ID NO: 28 is Pro and/or wherein amino acid residue 115 of the heavy chain constant region corresponding to SEQ ID NO: 28 is Glu.

3. An antibody, comprising a heavy chain and a light chain, wherein the heavy chain comprises a heavy chain variable (VH) region and a heavy chain constant region, and the light chain comprises a light chain variable (VL) region;

wherein the VL region comprises a VL complementary determining region (CDR) 1, a VL CDR2, and a VL CDR3, and wherein the VH region comprises a VH CDR1, a VH CDR2, and a VH CDR3;

wherein the VL CDR1 comprises SEQ ID NO: 1;

wherein the VL CDR2 comprises SEQ ID NO: 2;

wherein the VL CDR3 comprises SEQ ID NO: 3;

wherein the VH CDR1 comprises SEQ ID NO: 4;

wherein the VH CDR2 comprises SEQ ID NO: 5;

wherein the VH CDR3 comprises SEQ ID NO: 6;

wherein the heavy chain constant region comprises SEQ ID NO: 28;

and wherein the antibody specifically binds activated C1s.

4. The antibody of any one of claims 1 to 3, wherein the VL region comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 20, 22, and 24 and/or wherein the VH region comprises an amino acid sequence selected from the group consisting of SEQ ID NOs: 10, 12, 14, 16, and 18.

5. The antibody of any one of claims 1 to 4, wherein:

(a) the VH region comprises SEQ ID NO:10, and the VL region comprises SEQ ID NO:20;

(b) the VH region comprises SEQ ID NO:10, and the VL region comprises SEQ ID NO:22;

(c) the VH region comprises SEQ ID NO:10, and the VL region comprises SEQ ID NO:24;

(d) the VH region comprises SEQ ID NO:12, and the VL region comprises SEQ ID NO:20;

(e) the VH region comprises SEQ ID NO:12, and the VL region comprises SEQ ID NO:22;

(f) the VH region comprises SEQ ID NO:12, and the VL region comprises SEQ ID NO:24;

(g) the VH region comprises SEQ ID NO:14, and the VL region comprises SEQ ID NO:20;

(h) the VH region comprises SEQ ID NO:14, and the VL region comprises SEQ ID NO:22;

(i) the VH region comprises SEQ ID NO:14, and the VL region comprises SEQ ID NO:24;

(j) the VH region comprises SEQ ID NO:16, and the VL region comprises SEQ ID NO:20;

(j) the VH region comprises SEQ ID NO:16, and the VL region comprises SEQ ID NO:22;

(k) the VH region comprises SEQ ID NO:16, and the VL region comprises SEQ ID NO:24;

(l) the VH region comprises SEQ ID NO:18, and the VL region comprises SEQ ID NO:20;

(m) the VH region comprises SEQ ID NO:18, and the VL region comprises SEQ ID NO:22; or

(n) the VH region comprises SEQ ID NO:18, and the VL region comprises SEQ ID NO:24.

6. The antibody of any one of claims 1 to 5, wherein the VH region comprises SEQ ID NO:14, and the VL region comprises SEQ ID NO:22.

7. The antibody of any one of claims 1 to 6, wherein the light chain further comprises a light chain constant region, wherein preferably the light chain constant region comprises SEQ ID NO: 45.

8. The antibody of any one of claims 1 to 7, wherein the heavy chain comprises SEQ ID NO: 29, and/or wherein the light chain comprises SEQ ID NO: 30.

9. The antibody of any one of claims 1 to 8, which is a bispecific antibody or a multispecific antibody.

10. An immunoconjugate comprising the antibody of any one of claims 1 to 9.

11. A nucleotide or a set of nucleotides encoding the antibody of any one of claims 1 to 9.

12. A vector or a set of vectors comprising the nucleotide or the set of nucleotides of claim 11.

13. A host cell comprising the nucleotide or the set of nucleotides of claim 11 or the vector or the set of vectors of claim 12

14. A pharmaceutical composition comprising the antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, or the host cell of claim 13, and a pharmaceutically acceptable excipient.

15. The antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, or the host cell of claim 13, or the pharmaceutical composition of claim 14 for use in a treatment.

16. Use of the antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, or the host cell of claim 13, or the pharmaceutical composition of claim 14 in the manufacture of a medicament for treating a complement mediated disease or disorder in a subject in need thereof,

wherein the complement-mediated disease or disorder is selected from the group consisting of alloimmune disease, autoimmune disease, cancer, hematological disease, infectious disease, inflammatory disease, ischemia-reperfusion injury, neurodegenerative disease, neurodegenerative disorder, ocular disease, renal disease, transplant rejection, vascular disease, and vasculitis disease,

the antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, or the host cell of claim 13, or the pharmaceutical composition of claim 14 is to be administered to the subject.

17. Use of the antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, or the host cell of claim 13, or the pharmaceutical composition of claim 14 in the manufacture of a medicament for treating cold agglutinin disease in a subject in need thereof, wherein the antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, the host cell of claim 13, or the pharmaceutical composition of claim 14 is to be administered to the subject.

18. Use of the antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, or the host cell of claim 13, or the pharmaceutical composition of claim 14 in the manufacture of a medicament for treating antibody-mediated transplant rejection in a subject in need thereof, wherein the antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, the host cell of claim 13, or the pharmaceutical composition of claim 14 is to be administered to the subject.

19. Use of the antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, or the host cell of claim 13, or the pharmaceutical composition of claim 14 in the manufacture of a medicament for treating chronic inflammatory demyelinating polyneuropathy (CIDP) in a subject in need thereof, wherein the antibody of any one of claims 1 to 9, the immunoconjugate of claim 10, the nucleotide or the set of nucleotides of claim 11, the vector or the set of vectors of claim 12, the host cell of claim 13, or the pharmaceutical composition of claim 14 is to be administered to the subject.