

CLAIMS

1. A monoclonal antibody or antigen-binding fragment thereof that specifically binds to human complement factor C2, wherein said monoclonal antibody or fragment thereof comprises:
 - 5 a VH domain comprising the amino acid sequence set forth in SEQ ID NO: 3; and
 - a VL domain comprising the amino acid sequence set forth in SEQ ID NO: 2.
2. The monoclonal antibody of claim 1, wherein the monoclonal antibody comprises a full-length monoclonal antibody.
- 10 3. The monoclonal antibody of claim 1 or claim 2, wherein the monoclonal antibody comprises a human IgG heavy chain constant domain.
4. The monoclonal antibody of claim 3, wherein the heavy chain constant domain
15 comprises a human IgG1 heavy chain constant domain.
5. The monoclonal antibody of claim 4, wherein the human IgG1 heavy chain constant domain comprises the amino acid sequence set forth in SEQ ID NO: 4.
- 20 6. The monoclonal antibody of claim 3, wherein the heavy chain constant domain comprises a human IgG4 heavy chain constant domain.
7. The monoclonal antibody of claim 6, wherein the human IgG4 heavy chain constant domain comprises the amino acid sequence set forth in SEQ ID NO: 5.
- 25 8. The monoclonal antibody of claim 3, wherein the monoclonal antibody comprises a heavy chain comprising the amino acid sequence set forth as SEQ ID NO: 6 and a light chain comprising the amino acid sequence set forth as SEQ ID NO: 7.
- 30 9. The monoclonal antibody of claim 3, wherein the monoclonal antibody comprises a heavy chain comprising the amino acid sequence set forth as SEQ ID NO: 8 and a light chain comprising the amino acid sequence set forth as SEQ ID NO: 7.

10. A pharmaceutical composition comprising a monoclonal antibody or antigen-binding fragment thereof that specifically binds to human complement factor C2, and a pharmaceutically acceptable carrier, wherein said monoclonal antibody or fragment thereof comprises:
- 5 a VH domain comprising the amino acid sequence set forth in SEQ ID NO: 3; and
a VL domain comprising the amino acid sequence set forth in SEQ ID NO: 2.
11. The pharmaceutical composition of claim 10, wherein the monoclonal antibody comprises a full-length monoclonal antibody.
- 10 12. The pharmaceutical composition of claim 10 or claim 11, wherein the monoclonal antibody comprises a human IgG heavy chain constant domain.
13. A nucleic acid molecule or plurality of nucleic acid molecules encoding the
15 monoclonal antibody or antigen-binding fragment of claim 1 or the monoclonal antibody of any one of claims 2-9.
14. A vector or plurality of vectors comprising the nucleic acid molecule or plurality of nucleic acid molecules of claim 13.
- 20 15. A host cell comprising the nucleic acid molecule or plurality of nucleic acid molecules of claim 13.
16. A host cell comprising the vector or plurality of vectors of claim 14.
- 25 17. The host cell of any one of claims 14 to 16, wherein the host cell is a mammalian cell.
18. A method of making a monoclonal antibody or antigen-binding fragment thereof,
30 comprising
culturing a population of host cells of any one of claims 15 to 17 under conditions suitable for expression of the monoclonal antibody or antigen-binding fragment thereof; and
isolating the monoclonal antibody or antigen-binding fragment from the cells.

19. Use of the monoclonal antibody or antigen-binding fragment thereof of claim 1 or the monoclonal antibody of any one of claims 2-9 in the manufacture of a medicament for treating or preventing a disease or condition selected from autoimmune disease,
- 5 experimental allergic neuritis, type II collagen-induced arthritis, myasthenia gravis, hemolytic anemia, glomerulonephritis, idiopathic membranous nephropathy, rheumatoid arthritis, systemic lupus erythematosus, immune complex-induced vasculitis, multiple sclerosis, adult respiratory distress syndrome, stroke, xenotransplantation, allotransplantation, burn injuries, inflammatory disorders, sepsis, septic shock, toxicity
- 10 induced by the in vivo administration of cytokines or mAbs, antibody-mediated rejection of allografts such as kidney allografts, multiple trauma, ischemia-reperfusion injuries, and myocardial infarction.
20. The use of claim 19, wherein the subject is a human.