Claims

1. An antibody, or antigen binding fragment thereof, that binds a region of Factor P comprising SEQ ID NO: 408.

2. An antibody, or antigen binding fragment thereof, that binds a region of Factor P comprising SEQ ID NO: 407.

3. The antibody, or antigen binding fragment of any preceding claim that binds Factor P with a KD of less than or equal to 1.2 nM as measured by solution equilibrium titration.

4. The antibody, or antigen binding fragment of any preceding claim that binds Factor P with a KD of less than or equal to 500 pM.

5. The antibody, or antigen binding fragment of any preceding claim that binds Factor P with a KD of less than or equal to 200 pM.

6. The antibody, or antigen binding fragment, of any preceding claim, wherein said antibody binds human Factor P.

7. The antibody, or antigen binding fragment, any preceding claim that also binds cynomologous monkey, rabbit or rat Factor P.

8. The isolated antibody, or antigen binding fragment, of any preceding claim that further inhibits the alternative complement pathway as measured by an *in vitro* hemolytic assay with an IC50 of less than or equal to 25 nM.

9. The isolated antibody, or antigen binding fragment, of any preceding claim, wherein said antibody binds Human Factor P and inhibits the alternative complement pathway as measured by an *in vitro* hemolytic assay with an IC50 of less than or equal to 16 nM

10. The isolated antibody, or antigen binding fragment thereof, of any preceding claim that further inhibits the alternative complement pathway as measure by an *in vitro* C3b deposition assay with an IC50 of less than or equal to 10 nM.

11. The antibody, or antigen binding fragment of claim 10, wherein said antibody binds Human Factor P and inhibits the alternative complement pathway as measured by an *in vitro* C3b deposition assay with an IC50 of less than or equal to 3 nM.

12. The isolated antibody, or antigen binding fragment of any preceding claim, that further inhibits the alternative complement pathway as measure by an *in vitro* MAC deposition assay with an IC50 of less than or equal to 25 nM.

13. The antibody, or antigen binding fragment of any preceding claim, wherein said antibody binds Human Factor P and inhibits the alternative complement pathway as measure by an *in vitro* MAC deposition assay with an IC50 of less than or equal to 25 nM.

14. The isolated antibody, or antigen binding fragment, of any preceding claim that further inhibits the alternative complement pathway as measured by an *in vitro* hemolytic assay with an IC50 of less than or equal to 25 nM, an *in vitro* C3b deposition assay with an IC50 of less than or equal to 10 nM and an *in vitro* MAC deposition assay with an IC50 of less than or equal to 25 nM.

15. An isolated antibody, or antigen binding fragment thereof, that binds Factor P and competes with an antibody described in Table 1.

16. An isolated antibody, or antigen binding fragment, that binds Factor P, said antibody or antigen binding fragment comprising:

a) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 1, 2, and 3, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 4, 5, and 6, respectively;

b) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 15, 16, and 17, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 18, 19, and 20, respectively;

c) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 29, 30, and 31, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 32, 33, and 34, respectively;

d) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 43, 44, and 45, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 46, 47, and 48, respectively;

e) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 57, 58, and 59, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 60, 61, and 62, respectively;

f) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 71, 72, and 73, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 74, 75, and 76, respectively;

g) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 85, 86, and 87, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 88, 89, and 90, respectively;

h) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 99, 100, and 101, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 102, 103, and 104, respectively;

i) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 113, 114, and 115, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 116, 117, and 118, respectively;

j) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 127, 128, and 129, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 130, 131, and 132, respectively;

k) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 141, 142, and 143, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 144, 145, and 146, respectively;

l) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 155, 156, and 157, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 158, 159, and 160, respectively;

m) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 169, 170, and 171, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 172, 173, and 174, respectively;

n) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 183, 184, and 185, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 186, 187, and 188, respectively;

o) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 197, 198, and 199, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 200, 201, and 202, respectively;

p) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 211, 212, and 213, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 214, 215, and 216, respectively;

q) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 225, 226, and 227, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 228, 229, and 230, respectively;

r) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 239, 240, and 241, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 242, 243, and 244, respectively;

s) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 253, 254, and 255, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 256, 257, and 258, respectively; or

t) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 267, 268, and 269, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 270, 271, and 272, respectively.

17. The antibody, or antigen binding fragment, of any preceding claim comprising heavy and light chain variable regions having amino acid sequences at least 90% identical to SEQ ID NOs: 7 and 8; SEQ ID NOs: 21 and 22; SEQ ID NOs: 35 and 36; SEQ ID NOs: 49 and 50; SEQ ID NOs: 63 and 64; SEQ ID NOs: 77 and 78; SEQ ID NOs: 91 and 92; SEQ ID NOs: 105 and 106; SEQ ID NOs: 119 and 120; SEQ ID NOs: 133 and 134; SEQ ID NOs: 147 and 148; SEQ ID NOs: 161 and 162; SEQ ID NOs: 175 and 176; SEQ ID NOs: 189 and 190; SEQ ID NOs: 203 and 204; SEQ ID NOs: 217 and 218; SEQ ID NOs: 231 and 232; SEQ ID NOs: 245 and 246; SEQ ID NOs: 259 and 260; or SEQ ID NOs: 273 and 274, respectively.

18. An isolated antibody, or antigen binding fragment, which comprises a heavy chain variable region comprising SEQ ID NO: 7, 21, 35, 49, 63, 77, 91, 105, 119, 133, 147, 161, 175, 189, 203, 217, 231, 245, 259, or 273 and further comprising a light chain variable region, wherein said heavy chain variable region and said light chain variable region combine to form an antigen binding site to Factor P.

19. An isolated antibody, or antigen binding fragment, which comprises a light chain variable domain comprising SEQ ID NO: 8, 22, 36, 50, 64, 78, 92, 106, 120, 134, 148, 162, 176, 190, 204, 218, 232, 246, 260, or 274 and further comprising a heavy chain variable domain, wherein the light chain variable domain and the heavy chain variable domain combine to form an antigen binding site to Factor P.

20. The isolated antibody, or antigen binding fragment, of any preceding claim wherein said light chain variable domain region comprises SEQ ID NO: 8, 22, 36, 50, 64, 78, 92, 106, 120, 134, 148, 162, 176, 190, 204, 218, 232, 246, 260, or 274.

21. An isolated antibody, or antigen binding fragment, which comprises a heavy chain of SEQ ID NO: 9, 23, 37, 51, 65, 79, 93, 107, 121, 135, 149, 163, 177, 191, 205, 219, 233, 247, 261 or 275 and further comprising a light chain, wherein the heavy chain and the light chain combine to form an antigen binding site to Factor P.

22. An isolated antibody, or antigen binding fragment, which comprises a light chain of SEQ ID NO: 10, 24, 38, 52, 66, 80, 94, 108, 122, 136, 150, 164, 178, 192, 206, 220, 234, 248, 262 or 276 and further comprising a heavy chain, wherein

the light chain and the heavy chain combine to form an antigen binding site to Factor P.

23. The isolated antibody, or antigen binding fragment, of any preceding claim wherein said light chain comprises SEQ ID NO: 10, 24, 38, 52, 66, 80, 94, 108, 122, 136, 150, 164, 178, 192, 206, 220, 234, 248, 262 or 276.

24. An isolated antibody, or antigen binding fragment, that binds Factor P comprising a heavy chain with an amino acid sequence having at least 90% sequence identity to SEQ ID NO: 9, 23, 37, 51, 65, 79, 93, 107, 121, 135, 149, 163, 177, 191, 205, 219, 233, 247, 261 or 275 and further comprising a light chain with an amino acid sequence having at least 90% sequence identity to SEQ ID NO: 10, 24, 38, 52, 66, 80, 94, 108, 122, 136, 150, 164, 178, 192, 206, 220, 234, 248, 262 or 276.

25. An isolated antibody, or antigen binding fragment, that binds Factor P comprising a heavy chain and a light chain with an amino acid sequence having at least 90% sequence identity to SEQ ID NO: 9 and 10, 23 and 24, 37 and 38, 51 and 52, 65 and 66, 79 and 80, 93 and 94, 107 and 108, 121 and 122, 135 and 136, 149 and 150, 163 and 164, 177 and 178, 191 and 192, 205 and 206, 219 and 220, 233 and 234, 247 and 248, 261 and 262, or 275 and 276.

26. The antibody or antigen binding fragment of any preceding claim, wherein said antibody is a human antibody, a chimeric antibody, a monoclonal antibody, a single chain antibody, Fab, Fab', $F(ab')_2$, Fv or scFv.

27. The antibody or antigen binding fragment of any preceding claim, wherein said antibody is an IgG isotype.

28. An isolated nucleic acid molecule comprising a nucleotide encoding the antibody or fragment of any preceding claim.

29. An isolated nucleic acid molecule encoding a polypeptide comprising the heavy chain variable region of any preceding claim.

30. The nucleic acid molecule of any preceding claim, wherein said nucleic acid has at least 95% sequence identity to a sequence selected from SEQ ID NOs: 11, 25, 39, 53, 67, 81, 95, 109, 123, 137, 151, 165, 179, 193, 207, 221, 235, 249, 263, and 277.

31. An isolated nucleic acid molecule encoding a polypeptide comprising the light chain variable region of any preceding claim.

32. The nucleic acid molecule of any preceding claim wherein said nucleic acid sequence has 95% sequence identity to SEQ ID NO: 12, 26, 40, 54, 68, 82, 96, 110, 124, 138, 152, 166, 180, 194, 208, 222, 236, 250, 264, and 278.

33. An isolated nucleic acid molecule encoding a polypeptide comprising the heavy chain of any preceding claim.

34. The nucleic acid molecule of any preceding claim wherein said nucleic acid sequence has 95% sequence identity to SEQ ID NO: 13, 27, 41, 55, 69, 83, 97, 111, 125, 139, 153, 167, 181, 195, 209, 223, 237, 251, 265 and 279.

35. An isolated nucleic acid molecule encoding a polypeptide comprising the light chain of any preceding claim.

36. The nucleic acid molecule of any preceding claim wherein said nucleic acid sequence has 95% sequence identity to SEQ ID NO: 14, 28, 42, 56, 70, 84, 98, 112, 126, 140, 154, 168, 182, 196, 210, 224, 238, 252, 266 and 280.

37. A vector comprising the nucleic acid molecule of any one of claims 28-36.

38. An isolated host cell comprising the vector of claim 37.

39. A composition comprising the antibody or antigen binding fragment of any preceding claim and a pharmaceutically acceptable diluent or carrier.

40. A method of treating age related macular degeneration in a subject comprising administering to said subject, an effective amount of a composition comprising the antibody or antigen binding fragment of any preceding claim.

41. The method of claim 40 wherein the subject is human.

42. A method of inhibiting the alternative complement pathway in a subject comprising administering to said subject an effective amount of a composition comprising the antibody or antigen binding fragment of any preceding claim.

43. The method of claim 42 wherein the subject is human.

44. A method of inhibiting complement mediated cell death, comprising contacting a cell with a composition comprising the antibody or antigen binding fragment of any preceding claim.

45. A method of inhibiting the formation of C3b in a cell, comprising contacting a cell with a composition comprising the antibody or antigen binding fragment of any preceding claim.

46. A method of inhibiting the formation of the Membrane Attack Complex in a cell, comprising contacting a cell with a composition comprising the antibody or antigen binding fragment of any preceding claim.

47. A method of inhibiting the alternative complement pathway in a cell, comprising contacting a cell with a composition comprising the antibody or antigen binding fragment of any preceding claim and measuring said pathway activity by an *in vitro* hemolytic assay, an *in vitro* C3b deposition assay, or an *in vitro* MAC deposition assay, wherein a decrease in pathway activity is measured by a 10% decrease in hemolysis, C3b deposition and/or MAC deposition.

48. A composition comprising a first antibody, or antigen binding fragment thereof, that binds Factor P, and a second antibody, or antigen binding fragment thereof, that binds C5, wherein said combination inhibits the alternative complement pathway.

49. The composition of claim 48, wherein said combination inhibits ocular inflammation.

50. The composition of any of claims 48-49, wherein said ocular inflammation is determined by measuring neutrophil accumulation and/or macrophage recruitment in the retina.

51. The combination of any of claims 48-50, wherein said combination inhibits neutrophil accumulation in the retina.

52. The combination of any of claims 48-51, wherein said combination inhibits macrophage recruitment in the retina.

53. The composition of any of claims 48-52, wherein said antibody that binds Factor P, binds a region of Factor P comprising SEQ ID NO: 408.

54. The composition of any of claims 48-52, wherein said antibody that binds Factor P, binds a region of Factor P comprising SEQ ID NO: 407.

55. The composition of any of claims 48-54, wherein said first antibody, or antigen binding fragment thereof, is an antibody selected from Table 1 and said second antibody or antigen-binding fragment thereof is an antibody or antigen binding fragment selected from Table 2.

56. The composition of any of claims 48-55, wherein the first antibody, or antigen binding fragment thereof binds the same epitope as is an antibody described in Table 1 and the second antibody, or antigen binding fragment thereof, binds the same epitope as is an antibody described in Table 2.

57. The composition of any of claims 48-56 wherein the first antibody, or antigen binding fragment thereof comprises a heavy chain CDR1, 2, 3, and a light chain CDR1, 2, 3, selected from the group consisting of:

a) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 1, 2, and 3, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 4, 5, and 6, respectively;

b) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 15, 16, and 17, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 18, 19, and 20, respectively;

c) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 29, 30, and 31, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 32, 33, and 34, respectively;

d) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 43, 44, and 45, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 46, 47, and 48, respectively;

e) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 57, 58, and 59, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 60, 61, and 62, respectively;

f) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 71, 72, and 73, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 74, 75, and 76, respectively;

g) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 85, 86, and 87, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 88, 89, and 90, respectively;

h) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 99, 100, and 101, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 102, 103, and 104, respectively;

i) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 113, 114, and 115, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 116, 117, and 118, respectively;

j) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 127, 128, and 129, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 130, 131, and 132, respectively;

k) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 141, 142, and 143, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 144, 145, and 146, respectively;

l) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 155, 156, and 157, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 158, 159, and 160, respectively;

m) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 169, 170, and 171, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 172, 173, and 174, respectively;

n) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 183, 184, and 185, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 186, 187, and 188, respectively;

o) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 197, 198, and 199, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 200, 201, and 202, respectively;

p) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 211, 212, and 213, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 214, 215, and 216, respectively;

q) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 225, 226, and 227, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 228, 229, and 230, respectively;

r) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 239, 240, and 241, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 242, 243, and 244, respectively;

s) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 253, 254, and 255, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 256, 257, and 258, respectively; and

t) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 267, 268, and 269, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 270, 271, and 272, respectively

and wherein the second antibody or antigen binding fragment thereof comprises a heavy chain CDR1, 2, 3 and light chain CDR1, 2, 3 selected from the group consisting of:

a) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 410, 411, and 412, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 413, 414, and 415, respectively;

b) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 426, 427, and 428, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 429, 430, and 431, respectively;

c) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 442, 443, and 444, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 445, 446, and 447, respectively;

d) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 426, 458, and 428, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 429, 430, and 459, respectively; and

e) heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs: 470, 471, and 472, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs: 473, 474 and 475, respectively.

58. The composition of any of claims 48-57, wherein the first antibody or antigen binding fragment thereof comprises heavy and light chain variable regions having amino acid sequences at least 90% identical to SEQ ID NOs: 7 and 8; SEQ ID NOs: 21 and 22; SEQ ID NOs: 35 and 36; SEQ ID NOs: 49 and 50; SEQ ID NOs: 63 and 64; SEQ ID NOs: 77 and 78; SEQ ID NOs: 91 and 92; SEQ ID NOs: 105 and 106; SEQ ID NOs: 119 and 120; SEQ ID NOs: 133 and 134; SEQ ID NOs: 147 and 148; SEQ ID NOs: 161 and 162; SEQ ID NOs: 175 and 176; SEQ ID NOs: 189 and 190; SEQ ID NOs: 203 and 204; SEQ ID NOs: 217 and 218; SEQ ID NOs: 231 and 232; SEQ ID NOs: 245 and 246; SEQ ID NOs: 259 and 260; or SEQ ID NOs: 273 and 274, respectively, and wherein the second antibody or antigen binding fragment thereof comprises heavy and light chain variable regions having amino acid sequences at least 90% identical to SEQ ID NOs: 416 and 417; SEQ ID NOs: 432 and 433; SEQ ID NOs: 448 and 449; SEQ ID NOs: 460 and 461; or SEQ ID NOs: 476 and 477, respectively.

59. The composition of any of claims 48-58 wherein (a) the first antibody, or antigen binding fragment thereo comprises a heavy chain variable region comprising SEQ ID NO: 7, 21, 35, 49, 63, 77, 91, 105, 119, 133, 147, 161, 175, 189, 203, 217, 231, 245, 259, or 273 and further comprises a light chain variable region, wherein said heavy chain variable region and said light chain variable region combine to form an antigen binding site to Factor P and (b) wherein the second antibody or antigen binding fragment thereof comprises a heavy chain variable region comprising SEQ ID NO: 416, 432, 448, 460 or 476 and further comprises a light chain variable region, wherein said heavy chain variable region and said light chain variable region combine to form an antigen binding site to C5.

60. The composition of any of claims 48-59, wherein the first antibody, or antigen binding fragment thereof (a) comprises a light chain variable domain comprising SEQ ID NO: 8, 22, 36, 50, 64, 78, 92, 106, 120, 134, 148, 162, 176, 190, 204, 218, 232, 246, 260, or 274 and further comprises a heavy chain variable domain, wherein the light chain variable domain and the heavy chain variable domain combine to form an antigen binding site to Factor P and (b) wherein the second antibody or antigen binding fragment thereof comprises a light chain variable region comprises a light chain variable domain comprising SEQ ID NO: 417, 433, 449, 461 or 477 and further comprises a heavy chain variable domain, wherein the light chain variable domain and the heavy chain variable domain combine to form an antigen binding site to C5.

61. The composition of claim 59, wherein the first antibody or antigen binding fragment thereof comprises the light chain variable region sequence of SEQ ID NO: 8, 22, 36, 50, 64, 78, 92, 106, 120, 134, 148, 162, 176, 190, 204, 218, 232, 246, 260 or 274, and wherein the second antibody or antigen binding fragment thereof comprises the light chain variable region sequence of SEQ ID NO: 417, 433, 449, 461 or 477.

62. The composition of any of claims 48-61 wherein (a) the first antibody, or antigen binding fragment thereof comprises a heavy chain of SEQ ID NO: 9, 23, 37, 51, 65, 79, 93, 107, 121, 135, 149, 163, 177, 191, 205, 219, 233, 247, 261 or 275 and further comprises a light chain, wherein the heavy chain and the light chain combine to form an antigen binding site to Factor P and (b) wherein the second antibody or antigen binding fragment thereof comprises a heavy chain of SEQ

ID NO: 418, 434, 450, 462, or 478 and further comprises a light chain, wherein the heavy chain and the light chain combine to form an antigen binding site to C5.

63. The composition of any of claims 48-62, wherein (a) the first antibody, or antigen binding fragment thereof comprises a light chain of SEQ ID NO: 10, 24, 38, 52, 66, 80, 94, 108, 122, 136, 150, 164, 178, 192, 206, 220, 234, 248, 262 or 276 and further comprises a heavy chain, wherein the light chain and the heavy chain combine to form an antigen binding site to Factor D and (b) wherein the second antibody or antigen binding fragment thereof comprises a light chain of SEQ ID NO: 419, 435, 451, 463, or 479 and further comprises a heavy chain, wherein the light chain and the heavy chain combine to form an antigen binding site to C5.

64. The composition of claim 62, wherein the first antibody or antigen binding fragment thereof comprises a light chain of SEQ ID NO: 10, 24, 38, 52, 66, 80, 94, 108, 122, 136, 150, 164, 178, 192, 206, 220, 234, 248, 262 or 276, and wherein the second antibody or antigen binding fragment thereof comprises a light chain of SEQ ID NO: 419, 435, 451, 463, or 479.

65. The composition of claim 48-64, wherein the first antibody, or antigen binding fragment thereof comprises a heavy chain with an amino acid sequence having at least 90% sequence identity to SEQ ID NO: 9, 23, 37, 51, 65, 79, 93, 107, 121, 135, 149, 163, 177, 191, 205, 219, 233, 247, 261 or 275 and further comprises a light chain with an amino acid sequence having at least 90% sequence identity to SEQ ID NO: 10, 24, 38, 52, 66, 80, 94, 108, 122, 136, 150, 164, 178, 192, 206, 220, 234, 248, 262 or 276 and wherein the second antibody or antigen binding fragement thereof comprises a heavy chain with an amino acid sequence having at least 90% sequence identity to SEQ ID NO: 418, 434, 450, 462, or 478 and further comprises a light chain with an amino acid sequence having at least 90% sequence identity to SEQ ID NO: 419, 435, 451, 463, or 479.

66. The composition of any of claims 48-65, wherein the first antibody, or antigen binding fragment thereof comprises a heavy chain and a light chain with an amino acid sequence having at least 90% sequence identity, respectively, to SEQ ID NO: 9 and 10, 23 and 24, 37 and 38, 51 and 52, 65 and 66, 79 and 80, 93 and 94, 107 and 108, 121 and 122, 135 and 136, 149 and 150, 163 and 164,

177 and 178, 191 and 192, 205 and 206, 219 and 220, 233 and 234, 247 and 248, 261 and 262, or 275 and 276; and wherein the second antibody or antigen binding fragment thereof comprises a heavy chain and a light chain with an amino acid sequence having at least 90% sequence identity, respectively, to SEQ ID NOs: 418 and 419, 434 and 435; 450 and 451; 462 and 463; or 478 and 479.

67. An isolated nucleic acid molecule comprising a nucleotide sequence encoding the first antibody or fragment of any of claims 48-66.

68. An isolated nucleic acid molecule comprising nucleotide sequence encoding the second antibody or antigen binding fragment thereof of any of claims 48-66.

69. A vector comprising the nucleic acid molecule of claim 67 or 68

70. An isolated host cell comprising the vector of claim 69.

71. A method of treating age related macular degeneration in a subject comprising administering to said subject, an effective amount of the composition of any of claims 48-66.

72. The method of claim 71 wherein the subject is human.

73. A method of inhibiting the alternative complement pathway in a subject comprising administering to said subject an effective amount of the composition of any of claims 48-66.

74. The method of claim 73, wherein said subject is human.

75. The antibody or antigen binding fragment thereof of claim 1 for use as a medicament.

76. The composition of claim 48 for use as a medicament.

77. The antibody or antigen binding fragment thereof of any of claims 1-27 for use in the treatment of age related macular degeneration.

78. The antibody or antigen binding fragment thereof of any of claims 1-27 for use in the inhibition of the alternative complement pathway.

79. The antibody or antigen binding fragment thereof of any of claims 1-27 for use in the inhibition of complement mediated cell death.

80. The antibody or antigen binding fragment thereof of any of claims 1-27 for use in the inhibition of the formation of C3b in a cell.

81. The antibody or antigen binding fragment thereof of any of claims 1-27 for use in the inhibition of the formation of the Membrane Attack Complex in a cell.

82 The composition of any of claims 48-66 for use in the treatment of age related macular degeneration.

83. The composition of any of claims 48-66 for use in the inhibition of the alternative complement pathway in a subject.

84. A method of treating age related macular degeneration in a subject comprising administering to said subject, an effective amount of the composition of claim 48.

85. The method of claim 84 wherein the subject is human.

86. A method of inhibiting the alternative complement pathway in a subject comprising administering to said subject an effective amount of the composition of claim 48.

87. The method of claim 86, wherein said subject is human.

Claims

1. An isolated antibody, or antigen binding fragment, that binds Factor P, said antibody or antigen binding fragment comprising heavy chain variable region HCDR1, HCDR2 and HCDR3 as set forth in SEQ ID NOs:169, 170, and 171, respectively, and light chain variable region LCDR1, LCDR2, and LCDR3 as set forth in SEQ ID NOs:172, 173, and 174, respectively.

2. The antibody, or antigen binding fragment, of claim 1 comprising heavy and light chain variable regions having amino acid sequences at least 90% identical to SEQ ID NOs:175 and 176, respectively.

3. The antibody, or antigen binding fragment, of claim 1, which comprises a heavy chain variable region comprising SEQ ID NO:175, wherein said heavy chain variable region and said light chain variable region combine to form an antigen binding site to Factor P.

4. The antibody, or antigen binding fragment, of claim 1, which comprises a light chain variable domain comprising SEQ ID NO:176, wherein the light chain variable domain and the heavy chain variable domain combine to form an antigen binding site to Factor P.

5. The antibody, or antigen binding fragment, of any one of claims 1-4, which comprises a heavy chain comprising SEQ ID NO:177.

6. The antibody, or antigen binding fragment, of any one of claims 1-5, which comprises a light chain comprising SEQ ID NO:178.

7. The antibody, or antigen binding fragment, of any one of claims 1-4 comprising a heavy chain with an amino acid sequence having at least 90% sequence identity to SEQ ID NO:177 and a light chain with an amino acid sequence having at least 90% sequence identity to SEQ ID NO:178.

8. An isolated antibody, or antigen binding fragment, that binds Factor P comprising a heavy chain and a light chain of SEQ ID NO:177 and 178, respectively.

9. The antibody or antigen binding fragment of any one of claims 1-8, wherein said antibody is a human antibody, a chimeric antibody, a monoclonal antibody, a single chain antibody, Fab, Fab', $F(ab')_2$, Fv or scFv.

10. The antibody, or antigen binding fragment, of any one of claims 1-9, wherein said antibody is an IgG isotype.

11. An isolated nucleic acid molecule comprising a nucleotide encoding the antibody, or antigen binding fragment, of any one of claims 1-10.

12. The nucleic acid molecule of claim 11 wherein the nucleic acid sequence encoding the heavy chain variable region comprises has at least 95% sequence identity to SEQ ID NO:179.

13. The nucleic acid molecule of claim 11 or claim 12, wherein the nucleic acid sequence encoding the light chain variable region has at least 95% sequence identity to SEQ ID NO:180.

14. The nucleic acid molecule of any one of claims 11-13 comprising a nucleic acid sequence encoding a heavy chain, wherein the nucleic acid sequence encoding the heavy chain has at least 95% sequence identity to SEQ ID NO:181.

15. The nucleic acid molecule of any one of claims 11-14 comprising a nucleic acid sequence encoding a light chain, wherein the nucleic acid sequence encoding the light chain that has at least 95% sequence identity to SEQ ID NO:182.

16. A vector comprising the nucleic acid molecule of any one of claims 11-15.

17. An isolated host cell comprising the vector of claim 16.

18. A composition comprising the antibody, or antigen binding fragment, of any one of claims 1-10 and a pharmaceutically acceptable diluent or carrier.

19. Use of the antibody, or antigen binding fragment, of any one of claims 1-10 in the manufacture of a medicament for the treatment of age related macular degeneration in a subject.

20. Use of the antibody, or antigen binding fragment, of any one of claims 1-10 in the manufacture of a medicament for the inhibition of the alternative complement pathway in a subject.