WHAT IS CLAIMED IS:

1. An isolated human, humanized, or chimeric antibody, or antigen-binding fragment thereof, that specifically binds to an epitope within residues 70-76 of human amyloid A peptide.

2. The antibody or antigen-binding fragment of claim 1, which specifically binds to an epitope within residues 70-76 of SEQ ID NO: 2.

3. The antibody or antigen-binding fragment of claim 1, which specifically binds to an epitope comprising residues set forth as SEQ ID NOs: 4, 5, 6, 7, 8, 9, 10, or 11.

4. The antibody or antigen-binding fragment of claim 1, which competes for binding to human amyloid A peptide with antibody 2A4 produced by ATCC Accession Number PTA-9662.

5. The antibody or antigen-binding fragment of claim 1, which competes for binding to human amyloid A peptide with an antibody having a light chain variable region set forth as residues 20-131 of SEQ ID NO: 152 and a heavy chain variable region set forth as residues 20-138 of SEQ ID NO: 154.

6. The antibody or antigen-binding fragment of claim 1, which competes for binding to human amyloid A peptide with antibody 7D8 produced by ATCC Accession Number PTA-9468.

7. The antibody or antigen-binding fragment of claim 1, which competes for binding to human amyloid A peptide with an antibody having a light chain variable region set forth as residues 20-131 of SEQ ID NO: 153 and a heavy chain variable region set forth as residues 20-138 of SEQ ID NO: 154.

8. The antibody or antigen-binding fragment of claim 1, which is a humanized or chimeric version of antibody 2A4 produced by ATCC Accession Number PTA-9662 or a humanized or chimeric version of antibody 7D8 produced by ATCC Accession Number PTA-9468.

9. The antibody or antigen-binding fragment of claim 8, which comprises a light chain variable region comprising one or more complementarity regions of a 2A4 light chain variable region set forth as residues 20-131 of SEQ ID NO: 152 or one or more complementarity regions of a 7D8 light chain variable region set forth as residues 20-131 of SEQ ID NO: 153.

10. The antibody or antigen-binding fragment of claim 9, which comprises a light chain variable region comprising three complementarity regions of a 2A4 light chain variable region set forth as residues 20-131 of SEQ ID NO: 152 or three complementarity regions of a 7D8 light chain variable region set forth as residues 20-131 of SEQ ID NO: 153.

11. The antibody or antigen-binding fragment of claim 10, which comprises at least one light chain framework residue selected from the group consisting of L87 and L90 (Kabat numbering convention) occupied by Y and F, respectively, wherein the remainder of the light chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin light chain variable region.

12. (New)The antibody or antigen-binding fragment of claim 10, which comprises at least one light chain framework residue selected from the group consisting of +7, +14, +15, +17, +18, +50, +75, +88, + 92, and +109 (linear numbering) occupied by T, S, L, D, Q, K, Y, L, F, and L, respectively, wherein the remainder of the light chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin light chain variable region.

13. (New)The antibody or antigen-binding fragment of claim 12, which comprises at least one light chain framework residue selected from the group consisting of +75 and +92 (linear numbering) occupied by Y and F, respectively, wherein the remainder of the light chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin light chain variable region.

14. The antibody or antigen-binding fragment of claim 11, wherein the human acceptor immunoglobulin light chain variable region is a human kappa subgroup 2 light chain variable region (Kabat convention).

15. The antibody or antigen-binding fragment of claim 14, wherein the human subgroup 2 light chain variable region is from human germline VKIIA19/A3.

16. The antibody or antigen-binding fragment of claim 15, wherein the human Vk light chain variable region comprises a sequence set forth as SEQ ID NO: 166 or 167.

17. The antibody or antigen-binding fragment of claim 8, wherein the light chain variable region comprises an amino acid sequence set forth as residues 20-131 of SEQ ID NO: 152, residues 20-131 of SEQ ID NO: 153, or set forth as SEQ ID NO: 155, 156, 157, 158, 159, 160, 174, 175, or 176.

18. The antibody or antigen-binding fragment of claim 8, which comprises a heavy chain variable region comprising one or more complementarity regions of a 2A4 heavy chain variable region set forth as residues 20-138 of SEQ ID NO: 154.

19. The antibody or antigen-binding fragment of claim 18, which comprises a heavy chain variable region comprising two complementarity regions of a 2A4 heavy chain variable region set forth as residues 20-138 of SEQ ID NO: 154.

20. The antibody or antigen-binding fragment of claim 19, which comprises a heavy chain variable region comprising three complementarity regions of a 2A4 heavy chain variable region set forth as residues 20-138 of SEQ ID NO: 154.

21. The antibody or antigen-binding fragment of claim 20, which comprises at least one heavy chain framework residue selected from the group consisting of H37, H49, H70, and H93 (Kabat numbering convention) occupied by I, A, F, or V, respectively, wherein the remainder of the heavy chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin heavy chain variable region.

22. The antibody or antigen-binding fragment of claim 20, which comprises at least one heavy chain framework residue selected from the group consisting of +10, +15, +19, + 37, +49, +73, +78, +79, +80, +87, +95, +99, +119 (linear numbering) occupied by R, K, K, I, A, F,

Q, S, M, N, M, V, or A, respectively, wherein the remainder of the heavy chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin heavy chain variable region.

23. (New)The antibody or antigen-binding fragment of claim 22, which comprises at least one heavy chain framework residue selected from the group consisting of +37, +49, +73, and +99 (linear numbering) occupied by I, A, F, or V, respectively, wherein the remainder of the heavy chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin heavy chain variable region.

24. The antibody or antigen-binding fragment of claim 21, wherein the human acceptor immunoglobulin heavy chain variable region is a human gamma subgroup 3 heavy chain variable region (Kabat convention).

25. The antibody or antigen-binding fragment of claim 24, wherein the human gamma subgroup 3 heavy chain variable region comprises a sequence set forth as SEQ ID NO: 165.

26. The antibody or antigen-binding fragment of claim 8, wherein the heavy chain variable region comprises an amino acid sequence set forth as residues 20-138 of SEQ ID NO: 154 or set forth as SEQ ID NO: 161, 162, or 163.

27. The antibody or antigen-binding fragment of claim 8, which comprises a light chain variable region comprising three complementarity determining regions of a 2A4 light chain variable region set forth as residues 20-131 of SEQ ID NO: 152 or three complementarity regions of a 7D8 light chain variable region set forth as residues 20-131 of SEQ ID NO: 153, and a heavy chain variable region comprising three complementarity regions of a 2A4 heavy chain variable region set forth as residues 20-138 of SEQ ID NO: 154.

28. The antibody or antigen-binding fragment of claim 8, which comprises a light chain variable region comprising three complementarity determining regions set forth as SEQ ID NOs: 168, 169, and 170, and a heavy chain variable region comprising three complementarity regions set forth as SEQ ID NOs: 171, 172, and 173.

29. (New)The antibody or antigen-binding fragment of claim 8, which comprises a light chain variable region comprising three complementarity determining regions set forth as SEQ ID NOs: 177, 169, and 170, and a heavy chain variable region comprising three complementarity regions set forth as SEQ ID NOs: 171, 172, and 173.

30. The antibody or antigen-binding fragment of claim 27, which comprises a light chain variable region comprising an amino acid sequence set forth as residues 20-131 of SEQ ID NO: 152 or residues 20-131 of SEQ ID NO: 153, and a heavy chain variable region comprises an amino acid sequence set forth as residues 20-138 of SEQ ID NO: 154.

31. The antibody or antigen-binding fragment of claim 27, which comprises a light chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 155, 156, 157, 158, 159, 160, 174, 175, or 176; and a heavy chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 161, 162, or 163.

32. The antibody or antigen-binding fragment of claim 31, wherein the light chain variable region comprises an amino acid sequence set forth as SEQ ID NO: 155, and the heavy chain variable region comprises an amino acid sequence set forth as SEQ ID NO: 161.

33. The antibody or antigen-binding fragment of claim 31, wherein the light chain variable region comprises an amino acid sequence set forth as SEQ ID NO: 156, and the heavy chain variable region comprises an amino acid sequence set forth as SEQ ID NO: 162.

34. The antibody or antigen-binding fragment of claim 31, wherein the light chain variable region comprises an amino acid sequence set forth as SEQ ID NO: 157, and the heavy chain variable region comprises an amino acid sequence set forth as SEQ ID NO: 163.

35. An isolated antibody, or antigen-binding fragment thereof, which specifically binds to an epitope comprising X_1EDX_2 in an aggregated amyloid protein, wherein X_1 and X_2 are any amino acid.

36. The antibody or antigen-binding fragment of claim 35, wherein X_1 is H, T, F, S, P, A, L, C, Q, R, E, K, D, G, V, Y, I, or W, and wherein X_2 is T, S, E, R, I, V, F, D, A, G, M, L, N, P, C, K, Y, or Q.

37. The antibody or antigen-binding fragment of claim 36, wherein X_1 is H, T, F, or A.

38. The antibody or antigen-binding fragment of claim 36, wherein X_2 is T, S, E, D, or A.

39. The antibody or antigen-binding fragment of claim 37, wherein X_1 is H or A and X_2 is T, S, or A.

40. The antibody or antigen-binding fragment of claim 37, wherein X_1 is T and X_2 is E.

41. The antibody or antigen-binding fragment of claim 37, wherein X_1 is F and X_2 is D.

42. The antibody or antigen-binding fragment of claim 36, wherein X_1 is S and X_2 is E, F or A.

43. The antibody or antigen-binding fragment of claim 36, wherein X_1 is P and X_2 is E, I or F.

44. The antibody or antigen-binding fragment of claim 36, wherein the epitope consists of an amino acid sequence selected from the group consisting of GHEDT (SEQ ID NO: 3), HEDT (SEQ ID NO: 12), AEDS (SEQ ID NO: 13), AEDT (SEQ ID NO: 14), HEDA (SEQ ID NO: 15), and TEDE (SEQ ID NO: 16).

45. The antibody or antigen-binding fragment of claim 44, which specifically binds to an aggregated amyloid protein at an epitope comprising an amino acid sequence GHGAEDS (SEQ ID NO:4).

46. The antibody or antigen-binding fragment of claim 35, wherein the antibody binds to the amyloid protein in monomeric form with an affinity of less than about 10^7 M^{-1}.

47. The antibody or antigen-binding fragment of claim 35, wherein the amyloid protein is serum amyloid A protein (SAA).

48. The antibody or antigen-binding fragment of claim 35, wherein the amyloid protein is selected from the group consisting of immunoglobulin light chain protein, human islet amyloid precursor polypeptide (IAPP), beta amyloid peptide, transthyretin (TTR) and ApoA1.

49. The antibody or antigen-binding fragment of claim 48, wherein the amyloid protein is immunoglobulin light chain protein.

50. The antibody or antigen-binding fragment of claim 49, wherein the immunoglobulin light chain protein is Vλ6 Wil.

51. The antibody or antigen-binding fragment of claim 49, wherein the immunoglobulin light chain protein is Vκ.

52. The antibody or antigen-binding fragment of claim 48, wherein the amyloid protein is human islet amyloid precursor polypeptide (IAPP).

53. The antibody or antigen-binding fragment of claim 48, wherein the amyloid protein is beta amyloid peptide.

54. The antibody or antigen-binding fragment of claim 48, wherein the amyloid protein is transthyretin (TTR).

55. The antibody or antigen-binding fragment of claim 48, wherein the amyloid protein is ApoA1.

56. The antibody or antigen-binding fragment of claim 35, which is a human, humanized, or chimeric antibody or antigen-binding fragment.

57. The antibody or antigen-binding fragment of claim 56, which specifically binds to an epitope within residues 70-76 of human amyloid A peptide.

58. A method of therapeutically treating a subject having AA amyloidosis, comprising administering to the subject an effective dosage of the antibody or antigen-binding fragment of claim 1 to thereby treat AA amyloidosis in the subject.

59. The method of claim 58, wherein the subject is a human.

60. The method of claim 58, wherein therapeutically treating comprises slowing the progression of AA amyloidosis.

61. The method of claim 58, wherein therapeutically treating comprising inhibiting deposition of AA amyloid fibril aggregates.

62. The method of claim 58, wherein therapeutically treating comprises clearing of AA amyloid fibril aggregates.

63. The method of claim 58, wherein the subject suffers from an amyloid disease selected from the group consisting of rheumatoid arthritis, juvenile chronic arthritis, ankylosing

spondylitis, psoriasis, psoriatic arthropathy, Reiter's syndrome, Adult Still's disease, Behcet's syndrome, Crohn's disease, leprosy, tuberculosis, bronchiectasis, decubitus ulcers, chronic pyelonephritis, osteomyelitis, Whipple's disease, Hodgkin's lymphoma, renal carcinoma, carcinomas of gut, lung and urogenital tract, basal cell carcinoma, hairy cell leukemia, Familial Mediterranean Fever, and Castleman's Disease.

64. A method of prophylactically treating a subject susceptible to AA amyloidosis, comprising administering to the subject an effective dosage of the antibody or antigen-binding fragment of claim 1 to thereby effect prophylaxis of AA amyloidosis in the subject.

65. The method of claim 64, wherein the subject is a human.

66. The method of claim 64, wherein prophylactically treating is delaying onset of AA amyloidosis.

67. The method of claim 64, wherein prophylactically treating is reducing a risk of AA amyloidosis.

68. A method of therapeutically treating a subject suffering from an amyloidosis associated with an aggregated amyloid protein comprising the amino acid sequence ED, comprising administering to the subject an antibody or antigen-binding fragment of claim 30 to thereby treat the amyloidosis.

69. The method of claim 68, wherein the subject is a human.

70. The method of claim 68, wherein therapeutically treating comprises slowing the progression of amyloidosis.

71. The method of claim 68, wherein therapeutically treating comprises inhibiting deposition of amyloid fibril aggregates.

72. The method of claim 68, wherein therapeutically treating comprises clearing of amyloid fibril aggregates.

73. The method of claim 68, wherein the amyloid protein comprises the sequence AEDV (SEQ ID NO: 23), and the amyloidogenic disease is AA amyloidosis, AL amyloidosis, amyloid polyneuropathy, Mediterranean fever, Muckle-Wells syndrome, reactive systemic amyloidosis associated with systemic inflammatory diseases, myeloma or macroglobulinemia associated amyloidosis, amyloidosis associated with immunocyte dyscrasia, monoclonal gammopathy, occult dyscrasia, and local nodular amyloidosis associated with chronic inflammatory diseases.

74. A method of prophylactically treating a subject susceptible to an amyloidosis associated with an aggregated amyloid protein comprising the amino acid sequence ED, comprising administering to the subject an antibody or antigen-binding fragment of claim 30 to thereby treat the amyloidosis.

75. A method of detecting an amyloid deposit associated with AA amyloidosis in a subject comprising administering to the subject an antibody or antigen-binding fragment of claim 1 bound to a detectable label, and detecting the detectable label in the subject.

76. The method of claim 75, wherein the subject is a human.

77. The method of claim 75, wherein the subject suffers from or is susceptible to an amyloid disease selected from the group consisting of rheumatoid arthritis, juvenile chronic arthritis, ankylosing spondylitis, psoriasis, psoriatic arthropathy, Reiter's syndrome, Adult Still's disease, Behcet's syndrome, Crohn's disease, leprosy, tuberculosis, bronchiectasis, decubitus ulcers, chronic pyelonephritis, osteomyelitis, Whipple's disease, Hodgkin's lymphoma, renal carcinoma, carcinomas of gut, lung and urogenital tract, basal cell carcinoma, hairy cell leukemia, Familial Mediterranean Fever, and Castleman's Disease.

78. The method of claim 75, wherein the detectable label is a radiolabel.

79. The method of claim 78, wherein the radiolabel is ^{125}I.

80. The method of claim 75, wherein the detecting is performed by SPECT/CT imaging.

81. The method of claim 75, wherein the detecting is performed by NMR spectroscopy.

82. A method of detecting an amyloid deposit in a subject comprising administering to the subject the antibody or antigen-binding fragment of claim 30 that is bound to a detectable label and detecting the detectable label.

83. The method of claim 82, wherein the subject is a human.

84. The method of claim 82, wherein the amyloidosis is AA amyloidosis, AL amyloidosis, Alzheimer's disease, Mild Cognitive Impairment, amyloid polyneuropathy, Mediterranean fever, Muckle-Wells syndrome, reactive systemic amyloidosis associated with systemic inflammatory diseases, myeloma or macroglobulinemia associated amyloidosis, amyloidosis associated with immunocyte dyscrasia, monoclonal gammopathy, occult dyscrasia, or local nodular amyloidosis associated with chronic inflammatory diseases.

85. The method of claim 82, wherein the detectable label is a radiolabel.

86. The method of claim 85, wherein the radiolabel is ^{125}I.

87. The method of claim 82, wherein the detecting is performed by SPECT/CT imaging.

88. The method of claim 82, wherein the detecting is performed by NMR spectroscopy.

89. A method of therapeutically treating a subject having AA amyloidosis, comprising administering an agent that induces an immune response to residues 70-76 of amyloid A peptide effective to induce an immune response comprising antibodies against residues 70-76 of an amyloid A peptide and thereby treat AA amyloidosis in the subject.

90. A method of prophylactically treating a subject susceptible to AA amyloidosis, comprising administering an agent that induces an immune response to residues 70-76 of amyloid A peptide effective to induce an immune response comprising antibodies against residues 70-76 of an amyloid A peptide to thereby effect prophylaxis of AA amyloidosis in the subject.

Claims

1. A chimeric or humanized antibody or antigen-binding fragment thereof, which is a humanized or chimeric version of antibody 2A4 (ATCC Accession No. 9662) or a humanized or chimeric version of antibody 7D8 (ATCC Accession No. 9468);

wherein the humanized version of the antibody has light chain complementarity determining regions and heavy chain complementarity determining regions from either antibody 2A4 or 7D8 of a first species and light chain framework regions, a light chain constant region, heavy chain framework regions, and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species; and

wherein the chimeric version of the antibody has a light chain variable region and a heavy chain variable region from either antibody 2A4 or 7D8 of a first species and a light chain constant region and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species.

2. The antibody or antigen-binding fragment of claim 1, wherein the humanized or chimeric version of antibody 2A4 comprises a light chain variable region comprising three complementarity determining regions of a 2A4 light chain variable region set forth as residues 20-131 of SEQ ID NO: 152 and wherein the humanized or chimeric version of antibody 7D8 comprises a light chain variable region comprising three complementarity determining regions of a 7D8 light chain variable region set forth as residues 20-131 of SEQ ID NO: 153.

3. The antibody or antigen-binding fragment of claim 2, which comprises at least one light chain framework residue selected from the group consisting of L87 and L90 (Kabat numbering convention) occupied by Y and F, respectively, wherein the remainder of the light chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin light chain variable region.

4. The antibody or antigen-binding fragment of claim 2, which comprises at least one light chain framework residue selected from the group consisting of +7, +14, +15,

+17, +18, +50, +75, +88, + 92, and +109 (linear numbering) occupied by T, S, L, D, Q, K, Y, L, F, and L, respectively, wherein the remainder of the light chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin light chain variable region.

5. The antibody or antigen-binding fragment of claim 4, which comprises at least one light chain framework residue selected from the group consisting of +75 and +92 (linear numbering) occupied by Y and F, respectively, wherein the remainder of the light chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin light chain variable region.

6. The antibody or antigen-binding fragment of claim 3, wherein the human acceptor immunoglobulin light chain variable region is a human kappa subgroup 2 light chain variable region (Kabat convention).

7. The antibody or antigen-binding fragment of claim 6, wherein the human subgroup 2 light chain variable region is from human germline VKIIA19/A3.

8. The antibody or antigen-binding fragment of claim 7, wherein the human subgroup 2 light chain variable region from human germline VKIIA19/A3 comprises a sequence set forth as SEQ ID NO: 166 or 167.

9. The antibody or antigen-binding fragment of claim 2, wherein the light chain variable region comprises an amino acid sequence set forth as residues 20-131 of SEQ ID NO: 152, residues 20-131 of SEQ ID NO: 153, or set forth as SEQ ID NO: 155, 156, 157, 158, 159, 160, 174, 175, or 176.

10. The antibody or antigen-binding fragment of claim 1, wherein the humanized or chimeric version of antibody 2A4 or the humanized or chimeric version of antibody 7D8 comprises a heavy chain variable region comprising three complementarity determining regions of a heavy chain variable region set forth as residues 20-138 of SEQ ID NO: 154.

11. The antibody or antigen-binding fragment of claim 10, which comprises at least one heavy chain framework residue selected from the group consisting of H37, H49, H70, and H93 (Kabat numbering convention) occupied by I, A, F, or V, respectively, wherein the remainder of the heavy chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin heavy chain variable region.

12. The antibody or antigen-binding fragment of claim 3, characterized by comprising at least one heavy chain framework residue selected from the group consisting of H37, H49, H70, and H93 (Kabat numbering convention) occupied by I, A, F, or V, respectively, wherein the remainder of the heavy chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin heavy chain variable region.

13. The antibody or antigen-binding fragment of claim 10, which comprises at least one heavy chain framework residue selected from the group consisting of +10, +15, +19, + 37, +49, +73, +78, +79, +80, +87, +95, +99, +119 (linear numbering) occupied by R, K, K, I, A, F, Q, S, M, N, M, V, or A, respectively, wherein the remainder of the heavy chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin heavy chain variable region.

14. The antibody or antigen-binding fragment of claim 13, which comprises at least one heavy chain framework residue selected from the group consisting of +37, +49, +73, and +99 (linear numbering) occupied by I, A, F, or V, respectively, wherein the remainder of the heavy chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin heavy chain variable region.

15. The antibody or antigen-binding fragment of claim 4 characterized by comprising at least one heavy chain framework residue selected from the group consisting of +10, +15, +19, +37, +49, +73, +78, +79, +80, +87, +95, +99, +119 (linear numbering) occupied by R, K, K, I, A, F, Q, S, M, N, M, V, or A, respectively, wherein the remainder of the heavy chain variable region is occupied by a corresponding residue in a human acceptor immunoglobulin heavy chain variable region.

16. The antibody or antigen-binding fragment of claim 8, wherein the human acceptor immunoglobulin heavy chain variable region is a human gamma subgroup 3 heavy chain variable region (Kabat convention).

17. The antibody or antigen-binding fragment of claim 16, wherein the human gamma subgroup 3 heavy chain variable region comprises a sequence set forth as SEQ ID NO: 165.

18. The antibody or antigen-binding fragment of claim 10, wherein the heavy chain variable region comprises an amino acid sequence set forth as residues 20-138 of SEQ ID NO: 154 or set forth as SEQ ID NO: 161, 162, or 163.

19. The antibody or antigen-binding fragment of claim 1, wherein the humanized or chimeric version of antibody 2A4 comprises a light chain variable region comprising three complementarity determining regions of a 2A4 light chain variable region set forth as residues 20-131 of SEQ ID NO: 152 and a heavy chain variable region comprising three complementarity determining regions of a heavy chain variable region set forth as residues 20-138 of SEQ ID NO: 154 and wherein the humanized or chimeric version of antibody 7D8 comprises a light chain variable region comprising three complementarity determining regions of a 7D8 light chain variable region set forth as residues 20-131 of SEQ ID NO: 153 and a heavy chain variable region comprising three complementarity determining regions of a heavy chain variable region set forth as residues 20-138 of SEQ ID NO: 154.

20. The antibody or antigen-binding fragment of claim 1, which comprises a light chain variable region comprising three complementarity determining regions set forth as SEQ ID NOs: 168, 169, and 170, and a heavy chain variable region comprising three complementarity determining regions set forth as SEQ ID NOs: 171, 172, and 173.

21. The antibody or antigen-binding fragment of claim 1, which comprises a light chain variable region comprising three complementarity determining regions set forth as

SEQ ID NOs: 177, 169, and 170, and a heavy chain variable region comprising three complementarity determining regions set forth as SEQ ID NOs: 171, 172, and 173.

22. The antibody or antigen-binding fragment of claim 19, which comprises a light chain variable region comprising an amino acid sequence set forth as residues 20-131 of SEQ ID NO: 152 or residues 20-131 of SEQ ID NO: 153, and a heavy chain variable region comprising an amino acid sequence set forth as residues 20-138 of SEQ ID NO: 154.

23. The antibody or antigen-binding fragment of claim 19, which comprises a light chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 155, 156, 157, 158, 159, 160, 174, 175, or 176; and a heavy chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 161, 162, or 163.

24. The antibody or antigen-binding fragment of claim 23, wherein the light chain variable region comprises an amino acid sequence set forth as SEQ ID NO: 157, and the heavy chain variable region comprises an amino acid sequence set forth as SEQ ID NO: 163.

25. A composition for therapeutically treating a subject having AA amyloidosis or AL amyloidosis comprising an effective dosage of the antibody or antigen-binding fragment of any one of claims 1-24, characterized in that the composition is administered to the subject to thereby treat AA amyloidosis or AL amyloidosis in the subject.

26. The composition of claim 25, wherein the subject is a human.

27. A composition for prophylaxis in a subject susceptible to AA amyloidosis or AL amyloidosis comprising an effective dosage of the antibody or antigen-binding fragment of any one of claims 1-24, characterized in that the composition is administered to the subject to thereby effect prophylaxis of AA amyloidosis or AL amyloidosis in the subject.

28. The composition of claim 27, wherein the subject is a human.

29. A composition for treating AA amyloidosis or AL amyloidosis in a subject comprising an antibody or antigen-binding fragment that is a humanized or chimeric version of antibody 2A4 (ATCC Accession Number PTA-9662) or a humanized or chimeric version of antibody 7D8 (ATCC Accession Number PTA-9468) to treat the amyloidosis;

wherein the humanized version of the antibody has light chain complementarity determining regions and heavy chain complementarity determining regions from either antibody 2A4 or 7D8 of a first species and light chain framework regions, a light chain constant region, heavy chain framework regions, and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species; and

wherein the chimeric version of the antibody has a light chain variable region and a heavy chain variable region from either antibody 2A4 or 7D8 of a first species and a light chain constant region and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species.

30. The composition of claim 29, wherein the subject is a human.

31. A composition for prophylaxis of AA amyloidosis or AL amyloidosis in a human subject comprising an antibody or antigen-binding fragment that is a humanized or chimeric version of antibody 2A4 (ATCC Accession Number PTA-9662) or a humanized or chimeric version of antibody 7D8 (ATCC Accession Number PTA-9468) to treat the amyloidosis;

wherein the humanized version of the antibody has light chain complementarity determining regions and heavy chain complementarity determining regions from either antibody 2A4 or 7D8 of a first species and light chain framework regions, a light chain constant region, heavy chain framework regions, and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species; and

wherein the chimeric version of the antibody has a light chain variable region and a heavy chain variable region from either antibody 2A4 or 7D8 of a first species and a light chain constant region and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species.

32. A composition for detecting an amyloid deposit associated with AA amyloidosis in a subject comprising an antibody or antigen-binding fragment of any one of claims 1-24 bound to a detectable label, characterized in that the composition is administered to the subject and the detectable label is detected in the subject.

33. The composition of claim 32, wherein the subject is a human.

34. The composition of claim 32, wherein the detectable label is a radiolabel.

35. The composition of claim 34, wherein the radiolabel is ^{125}I.

36. A composition for detecting an amyloid deposit characterized by an aggregation of AA amyloid protein or AL amyloid protein in a human subject comprising an antibody or antigen-binding fragment that is a humanized or chimeric version of antibody 2A4 (ATCC Accession Number PTA-9662) or a humanized or chimeric version of antibody 7D8 (ATCC Accession Number PTA-9468), which antibody or antigen-binding fragment is bound to a detectable label;

wherein the humanized version of the antibody has light chain complementarity determining regions and heavy chain complementarity determining regions from either antibody 2A4 or 7D8 of a first species and light chain framework regions, a light chain constant region, heavy chain framework regions, and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species; and

wherein the chimeric version of the antibody has a light chain variable region and a heavy chain variable region from either antibody 2A4 or 7D8 of a first species and a light chain constant region and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species.

37. The composition of claim 36, wherein the detectable label is a radiolabel.

38. The composition of claim 37, wherein the radiolabel is ^{125}I.

39. A method of making an antibody or antigen-binding fragment comprising synthesizing or recombinantly expressing an antibody or antigen-binding fragment of any one of claims 1-24, and recovering the antibody.

40. A composition for treating AA amyloidosis or AL amyloidosis in a human subject comprising an antibody or antigen-binding fragment comprising a light chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 157, and a heavy chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 163.

41. A composition for prophylaxis of AA amyloidosis or AL amyloidosis in a human subject comprising an antibody or antigen-binding fragment comprising a light chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 157, and a heavy chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 163.

42. A composition for detecting an amyloid deposit characterized by an aggregation of AA amyloid protein or AL amyloid protein in a human subject comprising an antibody or antigen-binding fragment comprising a light chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 157, and a heavy chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 163, which antibody or antigen-binding fragment is bound to a detectable label.

43. A pharmaceutical composition comprising an antibody or antigen-binding fragment of any one of claims 1-24 and a pharmaceutically acceptable carrier.

44. A pharmaceutical composition comprising a humanized or chimeric antibody comprising a humanized or chimeric version of antibody 2A4 (ATCC Accession Number PTA-9662), or a humanized or chimeric version of antibody 7D8 (ATCC Accession Number PTA-9468), and a pharmaceutically acceptable carrier;

wherein the humanized version of the antibody has light chain complementarity determining regions and heavy chain complementarity determining regions from either antibody 2A4 or 7D8 of a first species and light chain framework regions, a light chain constant region, heavy chain framework regions, and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species; and

wherein the chimeric version of the antibody has a light chain variable region and a heavy chain variable region from either antibody 2A4 or 7D8 of a first species and a light chain constant region and a heavy chain constant region from either antibody 2A4 or 7D8 of a second species.

45. A pharmaceutical composition comprising a humanized antibody comprising a light chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 157, a heavy chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 163, and a pharmaceutically acceptable carrier.

46. The pharmaceutical composition of claim 44 or 45, which is formulated for parenteral administration.

47. A nucleic acid encoding the amino acid sequence set forth as SEQ ID NO: 157.

48. A nucleic acid encoding the amino acid sequence set forth as SEQ ID NO: 163.

49. A host cell comprising a nucleic acid encoding the amino acid sequence set forth as SEQ ID NO: 157.

50. The host cell of claim 49, which is a mammalian cell selected from the group consisting of CHO cells, HEK-293 cells, HeLa cells, CV-1 cells, and COS cells.

51. The host cell of claim 49, wherein the host cell is expressing an antibody light chain variable region comprising the amino acid sequence set forth as SEQ ID NO: 157.

52. A host cell comprising a nucleic acid encoding the amino acid sequence set forth as SEQ ID NO: 163.

53. The host cell of claim 52, which is a mammalian cell selected from the group consisting of CHO cells, HEK-293 cells, HeLa cells, CV-1 cells, and COS cells.

54. The host cell of claim 52, wherein the host cell is expressing an antibody heavy chain variable region comprising the amino acid sequence set forth as SEQ ID NO: 163.

55. A CHO cell comprising at least one nucleic acid encoding the amino acid sequence set forth as SEQ ID NO: 157 and the amino acid sequence set forth as SEQ ID NO: 163.

56. The CHO cell of claim 55, wherein the host cell is expressing an antibody comprising a light chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 157 and a heavy chain variable region comprising an amino acid sequence set forth as SEQ ID NO: 163.

57. A hybridoma expressing murine monoclonal antibody 2A4 (ATCC Accession Number PTA-9662).

58. A hybridoma expressing murine monoclonal antibody 7D8 (ATCC Accession Number PTA-9468).

59. A composition for detecting an amyloid deposit associated with AA or AL amyloidosis in a subject comprising an antibody or antigen-binding fragment of any one of

claims 1-24, which is bound to a detectable label, characterized in that the composition is administered to the subject and the detectable label is detected in the subject.

60. Use of an antibody or antigen-binding fragment of any one of claims 1-24 for preparation of a medicament for therapeutically or prophylactically treating a subject having AA or AL amyloidosis.

61. A pharmaceutical composition comprising an antibody or antigen-binding fragment of any one of claims 1-24 for therapeutically or prophylactically treating a subject having AA or AL amyloidosis.