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(71) Applicant: **BROADWING BIO LLC** [US/US]; 171 Oyster Point Boulevard, Suite 300, South San Francisco, California 94080 (US).

(72) Inventor: **PETERSON, Andrew**; c/o Broadwing Bio LLC, 171 Oyster Point Boulevard, Suite 300, South San Francisco, California 94080 (US).

(74) Agent: **SCHLUETER, Peter J.**; Casimir Jones, S.C., 2275 Deming Way, Suite 310, Middleton, Wisconsin 53562 (US).

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(54) Title: BISPECIFIC ANTIBODIES AND METHODS OF TREATING OCULAR DISEASE

FIG. 21B

Sample ID	Type	C1s	Bb	C3b	C5b	Non-Bb Cleavage	Cleavage Enhanced
ATX-P-3360	Sample	1733.97	1279.04	1992.60	1834.4		
ATX-P-3362	Sample	459.71	536.56	402.95	422.8		
ATX-P-3368	Sample	1724.69	1608.88	1593.69	2027.6		
ATX-P-3365	Sample	1820.60	981.10	1292.78	1027.1	5.14	
ATX-P-3367	Sample	189.28	196.30	173.99	701.4	6.32	
ATX-P-3369	Sample	154.88	181.71	96.45	71.2	N/A	
ATX-P-3370	Sample	238.71	242.80	221.66	3140		
ATX-P-3371	Sample	338.53	410.10	308.66	389.1		
ATX-P-3373	Sample	1606.93	944.18	1558.46	923.0		
ATX-P-3375	Sample					N/D	N/A
ATX-P-3378	Sample	1812.30	1587.77	1734.82	1053.1		
ATX-P-3382	Sample	1482.41	1128.60	1383.79	1642.5		
ATX-P-3383	Sample	1469.46	913.64	1457.02	944.1		
ATX-P-3384	Sample	1835.01	870.13	1588.51	984.0		
ATX-P-3386	Sample	1160.57	893.23	1139.27	1061.3		
ATX-P-3387	Sample	855.76	733.08	829.26	838.5		
ATX-P-3389	Sample	1383.87	867.07	1346.38	1195.1		
ATX-P-3391	Sample	1720.77	1284.70	1646.92	2007.0		
ATX-P-3392	Sample	1419.95	1068.87	1381.05	1125.6		
ATX-P-3395	Sample	2177.01	1521.47	2142.82	1329.1		
ATX-P-3396	Sample	440.26	246.52	148.01	350.1		
ATX-P-3397	Sample	1809.80	1649.44	1826.98	2364.9		
ATX-P-3405	Sample	689.28	340.23	668.71	448.4		
ATX-P-3406	Sample	1911.87	1730.77	1871.74	1946.1		
ATX-P-3407	Sample	1800.49	1295.15	1545.81	1944.4		
ATX-P-3408	Sample	2147.07	2129.06	2092.22	2682.1		
ATX-P-3410	Sample	856.85	511.63	844.05	530.5		
ATX-P-3412	Sample	1197.92	1389.57	1027.97	1168.0		
ATX-P-3413	Sample	1362.15	936.68	1339.01	1843.1		
ATX-P-3414	Sample	1817.52	1443.80	1772.12	1672.0		
ATX-P-3419	Sample	1110.63	838.05	1086.04	802.1		
ATX-P-3421	Sample	1876.00	1781.31	1805.22	2056.8		
ATX-P-3428	Sample	1608.10	1617.06	1571.41	1601.1		
ATX-P-3430	Sample	451.69	418.94	445.30	595.9		
ATX-P-3431	Sample	760.98	675.23	673.06	674.8		
ATX-P-3435	Sample	1556.08	1478.99	1518.38	1360.3		
ATX-P-3436	Sample	201.37	145.74	195.08	345.2		
ATX-P-3437	Sample	1241.55	890.15	1224.93	843.6		
ATX-P-3440	Sample	1484.90	1451.74	1275.12	1468.1		

FIGS. 21A-21B (cont'd)

FIG. 21B
(cont'd)

ATX-P-3442	Sample	1646.82	1146.62	1611.48	1524.4		
ATX-P-3444	Sample	2179.55	2177.55	2135.35	2484.7		
ATX-P-3447	Sample	95.99	108.90	83.38	100.7		
ATX-P-3448	Sample	177.52	182.55	175.48	194.9		
ATX-P-3449	Sample	87.08	83.14	94.76	98	N/D	N/A
ATX-P-3450	Sample	170.12	256.53	155.26	126.8		N/A
ATX-P-3451	Sample	1456.97	1254.94	1450.77	1548.2		
ATX-P-3453	Sample	2204.80	2144.64	2134.90	2415.9		
ATX-P-3454	Sample	1661.85	1538.43	1644.43	2210.8		
ATX-P-3455	Sample	2360.00	2218.44	2237.26	2470.1		
ATX-P-3456	Sample	2103.91	1815.42	2087.37	2260.4		
ATX-P-3458	Sample	701.36	675.72	671.30	600.4		
ATX-P-3459	Sample	1899.70	1863.64	1822.21	2247.3		
ATX-P-3462	Sample	2180.01	1959.89	2118.19	2597.8		
ATX-P-3463	Sample	2071.21	1563.66	2034.66	1813.8		
ATX-P-3466	Sample	1949.06	1900.26	1880.80	2506.2		
ATX-P-3467	Sample	1080.08	843.48	968.90	908.5		
ATX-P-3468	Sample	174.82	142.55	152.70	146.1		
ATX-P-3469	Sample	2418.04	1750.17	2379.82	2235.8		
ATX-P-3470	Sample	992.80	604.80	985.87	699.5		
ATX-P-3471	Sample	275.07	336.75	253.80	327.1		N/A
ATX-P-3472	Sample	1858.22	1184.95	1810.87	1727.6		
ATX-P-3361	Sample	942.85	864.05	910.58	1343.2		
ATX-P-3366	Sample	424.18	298.85	418.55	307.5		
ATX-P-3376	Sample	115.64	113.19	108.04	109.9		N/A
ATX-P-3377	Sample	253.91	360.52	228.75	317.6		
ATX-P-3418	Sample	1908.09	1800.44	1852.08	2464.6		
ATX-P-3420	Sample	2346.50	2196.43	2314.17	2739.5		
ATX-P-3426	Sample	461.56	468.66	450.40	470.9		
ATX-P-3432	Sample	2698.60	2653.51	2598.94	3207.6		
ATX-P-3433	Sample	517.74	402.66	608.31	494.9		
ATX-P-3438	Sample	2079.58	2041.40	2012.13	2408.1		
ATX-P-3441	Sample	1739.86	1613.62	1678.25	2128.5		
ATX-P-3446	Sample	900.91	410.25	870.81	381.6		
ATX-P-3452	Sample	1800.50	1485.16	1736.42	2084.8		
ATX-P-1890	Comparator	1768.56	1762.16	1761.23	1760.2		
ATX-P-NB	Negative Control	40.08	38.84	39.09	45.2	N/A	N/A

FIGS. 21A-21B (cont'd)

(57) Abstract: The present disclosure relates to the treatment and/or prevention of age-related macular degeneration (AMD), including both neovascular AMD ("wet" AMD) and non-neovascular AMD ("dry" AMD), as well as advanced forms of non-neovascular AMD (geographic atrophy or GA). In particular, the present disclosure provides novel therapeutic bispecific antibodies that target components of the alternative pathway of the complement activation system.

[Continued on next page]

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BISPECIFIC ANTIBODIES AND METHODS OF TREATING OCULAR DISEASE

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to and the benefit of U.S. Provisional Patent Application No. 63/336,766 filed April 29, 2022, which is incorporated herein by reference in its entirety for all purposes.

SEQUENCE LISTING

[0002] The text of the computer readable sequence listing filed herewith, titled "40820_601_SequenceListing," created on April 27, 2023, having a file size of 1,823,343 bytes bytes, is hereby incorporated by reference in its entirety.

FIELD

[0003] Embodiments of the present disclosure relate to the treatment and/or prevention of age-related macular degeneration (AMD), including both neovascular AMD ("wet" AMD) and non-neovascular AMD ("dry" AMD), as well as advanced forms of non-neovascular AMD (geographic atrophy or GA). In particular, the present disclosure provides novel therapeutic bispecific antibodies that target components of the alternative pathway of the complement activation system.

BACKGROUND

[0004] Age-Related Macular Degeneration (AMD) is the leading cause of severe vision loss in adults over age 50. The Centers for Disease Control and Prevention estimate that 1.8 million people have AMD and another 7.3 million are at substantial risk for vision loss from AMD. This eye disease occurs when there are changes to the macula, a small portion of the retina that is located on the inside back layer of the eye. AMD is a loss of central vision that can occur in two forms: "dry" (atrophic or non-neovascular) and "wet" (exudative or neovascular). Most people with macular degeneration have the dry form. Geographic atrophy (GA) is considered the late stage of the dry form of AMD, characterized by focal and progressive loss of photoreceptors. GA is less common than neovascular AMD, and it is responsible for 10-20% of cases of legal blindness in this condition, affecting more than 5 million people worldwide. Currently there is no approved or effective treatment to prevent either the onset or progression of GA; however, in recent years,

significant progress has been made in understanding the pathogenesis of GA, which has led to a number of new potential therapies. Treatments of wet AMD are rapidly evolving and some now target specific biochemical events such as angiogenesis. The use of pharmacotherapy targeting vascular endothelial growth factor (VEGF) has been shown to slow vision loss and even lead to vision improvement in some patients with wet macular degeneration. However, the ability to treat both wet and dry AMD with a single biologic has not been established.

SUMMARY

[0005] Embodiments of the present disclosure include a bispecific antibody, or an antigen binding fragment thereof, which specifically binds human Complement Factor H Related 4 (CFHR) and human Complement Component 3 (C3). In some embodiments, the human CFHR4 is the CFHR4 b variant (CFHR4b), which is optionally a polypeptide comprising or consisting of the amino acid sequence of SEQ ID NO: 580. In some embodiments, the human C3 is the b variant of C3 (C3b), which is optionally a polypeptide comprising or consisting of the amino acid sequence of SEQ ID NO: 1645.

[0006] In some embodiments, the bispecific antibody or fragment thereof is monoclonal, optionally recombinant. In some embodiments, the bispecific antibody or fragment thereof is human, humanized, or chimeric. In some embodiments, the bispecific antibody or fragment thereof is a full length antibody, a single chain antibody, a single chain variable fragment (scFv), a variable fragment (Fv), a fragment antigen-binding region (Fab), a Fab-C, a Fab'-SH, a (Fab')2, a single-domain antibody (sdAb), a VHH antibody, a nanobody, a camelid-derived single-domain antibody, a shark IgNAR-derived single-domain antibody fragment (VNAR), a diabody, a triabody, an anticalin or an aptamer, optionally wherein the antibody is a full length antibody comprising an Fc region such as a human IgG1, IgG2, IgG3 or IgG4 region.

[0007] In some embodiments, the bispecific antibody or fragment thereof is conjugated to at least one additional moiety, optionally selected from: an antigen binding moiety, such as an antibody or antigen-binding fragment thereof, which is capable of specific binding to a target which is not human CFHR4 or human C3, preferably wherein said target is expressed in the human eye; a therapeutic or cytotoxic moiety; a detection moiety; a purification moiety; a half-life extension moiety, optionally a polypeptide that is at least 20 amino acids in length and comprises

any combination of G, A, S T, E, and P residue, which polypeptide is conjugated to the C- or N-terminus of the antibody.

[0008] In some embodiments, the bispecific antibody or fragment thereof is a polypeptide comprising: one, two or all three HCDRs of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 3; and one, two or all three of the corresponding LCDRs of said exemplary antibody; and/or a VH sequence having at least 90% identity to the VH sequence of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 4; and optionally a VL sequence having at least 90% identity to the corresponding VL sequence of said exemplary antibody, preferably wherein variation is not permitted in the HCDRs or LCDRs; and/or all six CDRs of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 3; the VH and VL sequences of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 4; and/or the full length heavy chain (VH + constant) sequence of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 5; and optionally the corresponding full length light chain (VL + constant) sequence of said exemplary antibody.

[0009] In some embodiments, the bispecific antibody or fragment thereof is a polypeptide comprising: one, two or all three HCDRs of any one of the exemplary C3 antibodies the sequences of which are provided in Table 6; and one, two or all three of the corresponding LCDRs of said exemplary antibody; and/or a VH sequence having at least 90% identity to the VH sequence of any one of the exemplary C3 antibodies the sequences of which are provided in Table 7; and optionally a VL sequence having at least 90% identity to the corresponding VL sequence of said exemplary antibody provided in Table 8, preferably wherein variation is not permitted in the HCDRs or LCDRs; and/or all six CDRs of any one of the exemplary C3 antibodies the sequences of which are provided in Table 6; the VH and VL sequences of any one of the exemplary C3 antibodies the sequences of which are provided in Tables 7 and 8; and/or the full length heavy chain (VH + constant) sequence of any one of the exemplary C3 antibodies the sequences of which are provided in Table 9; and optionally the corresponding full length light chain (VL + constant) sequence of said exemplary antibody provided in Table 10.

[0010] Embodiments of the present disclosure also include a polynucleotide encoding the bispecific antibody or fragment thereof. In some embodiments, the polynucleotide comprises or consists of a nucleic acid sequence having at least 70%, 80%, 90%, or 100% identity to a nucleic

acid sequence of any one of the exemplary antibodies the sequences of which are provided in Tables 5, 9, and 10. Embodiments of the present disclosure also include an expression vector comprising the polynucleotide, which is optionally an adeno-associated virus (AAV) vector, a lentiviral (LV) vector, a herpes simplex virus (HSV) vector, or a retrovirus vector.

[0011] Embodiments of the present disclosure also include a pharmaceutical composition comprising the bispecific antibody or fragment thereof, the corresponding polynucleotide, or the vector comprising the polynucleotide. In some embodiments, the composition comprises at least one pharmaceutically acceptable carrier, diluent or preservative; and/or at least one additional active ingredient.

[0012] In some embodiments, the pharmaceutical composition is suitable for ocular administration to a subject, optionally by delivery using a conjunctival insert, a contact lens, a gel, a nanoparticle, a mucoadhesive polymer, an ointment, a solution, a suspension, eye drops, and/or an implant, preferably by injection into the vitreous fluid.

[0013] Embodiments of the present disclosure also include the bispecific antibody or fragment thereof, the corresponding polynucleotide, the vector comprising the polynucleotide, or the pharmaceutical composition, for use as a medicament, optionally for use in a method of treating a disease of the eye in a subject. In some embodiments, the disease is characterized by increased activation of the complement system, in particular the alternative pathway, and in particular within the eye of the subject, for example in drusen or retinal pigment epithelium (RPE) cells of the subject. In some embodiments, the method comprises ocular administration of the antibody, preferably by injection into the vitreous fluid, and said administration preferably relieves at least one symptom in the subject selected from visual distortion, reduced central vision, blurred vision, and/or difficulty adapting to low light. In some embodiments, the disease is age-related macular degeneration (AMD), including dry AMD, which may be at an early, intermediate or advanced stage (the latter otherwise known as geographic atrophy, GA).

[0014] In accordance with the above, embodiments of the present disclosure include a bispecific antibody comprising a first antigen-binding site directed against Complement Factor H Related 4 (CFHR4) and a second antigen-binding site directed against Complement Component 3 (C3). In some embodiments, the first anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380; and a

light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406; and the second anti-C3 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3.

[0015] Embodiments of the present disclosure include a bispecific antibody comprising a first antigen-binding site directed against Complement Factor H Related 4 (CFHR4) and a second antigen-binding site directed against Complement Component 3 (C3). In some embodiments, the first anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3; and the second anti-C3 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 1127-1200; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 1275-1348.

[0016] Embodiments of the present disclosure include a bispecific antibody comprising a first antigen-binding site directed against Complement Factor H Related 4 (CFHR4) and a second antigen-binding site directed against Complement Component 3 (C3). In some embodiments, the first anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406; and the second anti-C3 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 1127-1200; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 1275-1348.

[0017] In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 2; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 9;

and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 15. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 3; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 10; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 16. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 4; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 11; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 17. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 5; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 12; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 18. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 6; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 13; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 19. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 7; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 14; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 20. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 22; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 33; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 43. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 23; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 34; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 44. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 24; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 35; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 45. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 25; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 36; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 46. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 26; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 37; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 47. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 27; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 38; and

the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 48. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 28; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 39; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 49. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 29; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 40; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 50. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 30; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 41; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 51. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 31; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 42; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 52. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 54; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 66; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 77. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 55; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 67; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 78. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 56; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 68; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 79. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 57; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 69; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 80. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 58; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 70; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 81. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 59; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 71; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 82. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 60; the anti-CFHR4 HCDR2 comprises the amino acid sequence of

SEQ ID NO: 72; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 83. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 61; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 73; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 84. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 62; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 74; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 85. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 63; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 75; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 86. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 64; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 76; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 87. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 89; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 103; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 116. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 90; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 104; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 117. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 91; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 105; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 118. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 92; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 106; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 119. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 93; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 107; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 120. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 94; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 108; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 121. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 95; the anti-CFHR4 HCDR2

comprises the amino acid sequence of SEQ ID NO: 109; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 122. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 96; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 110; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 123. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 97; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 111; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 124. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 98; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 112; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 125. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 99; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 113; and the HCDR3 comprises the amino acid sequence of SEQ ID NO: 126. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 100; the HCDR2 comprises the amino acid sequence of SEQ ID NO: 114; and the HCDR3 comprises the amino acid sequence of SEQ ID NO: 127. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 101; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 115; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 128.

[0018] In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 130; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 153; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 175. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 131; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 154; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 176. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 132; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 155; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 177. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 133; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 156; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 178. In some embodiments, the anti-CFHR4

LCDR1 comprises the amino acid sequence of SEQ ID NO: 134; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 157; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 179. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 135; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 158; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 180. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 136; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 159; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 181. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 137; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 160; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 182. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 138; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 161; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 183. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 139; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 162; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 184. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 140; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 163; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 185. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 141; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 164; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 186. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 142; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 165; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 187. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 143; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 166; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 188. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 144; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 167; and the anti-CFHR4 LCDR3 comprises the amino acid sequence

of SEQ ID NO: 189. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 145; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 168; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 190. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 146; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 169; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 191. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 147; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 170; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 192. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 148; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 171; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 193. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 149; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 172; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 194. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 150; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 173; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 195. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 151; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 174; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 196. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 198; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 201; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 204. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 199; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 202; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 205. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 207; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 217; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 227. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 208; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 218; and the

anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 228. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 209; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 219; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 229. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 210; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 220; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 230. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 211; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 221; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 231. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 212; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 222; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 232. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 213; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 223; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 233. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 214; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 224; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 234. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 215; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 225; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 235. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 237; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 245; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 253. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 238; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 246; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 254. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 239; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 247; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 255. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 240; the anti-CFHR4 LCDR2

comprises the amino acid sequence of SEQ ID NO: 248; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 256. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 241; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 249; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 257. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 242; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 250; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 258. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 243; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 251; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 259.

[0019] In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 583; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 602; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 620. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 584; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 603; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 621. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 585; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 604; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 622. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 586; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 605; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 623. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 587; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 606; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 624. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 588; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 607; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 625. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 589; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 608; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 626. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID

NO: 590; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 609; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 627. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 591; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 610; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 628. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 592; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 611; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 629. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 593; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 612; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 630. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 594; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 613; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 631. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 595; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 614; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 632. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 596; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 615; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 633. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 597; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 616; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 634. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 598; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 617; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 635. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 599; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 618; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 636. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 600; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 619; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 637. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 639; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 652; and the anti-C3 HCDR3

comprises the amino acid sequence of SEQ ID NO: 664. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 640; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 653; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 665. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 641; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 654; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 666. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 642; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 655; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 667. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 643; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 656; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 668. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 644; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 657; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 669. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 645; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 658; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 670. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 646; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 659; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 671. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 647; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 660; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 672. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 648; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 661; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 673. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 649; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 662; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 674. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 650; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 663; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 675. In some embodiments, the anti-C3 HCDR1 comprises

the amino acid sequence of SEQ ID NO: 677; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 706; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 734. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 678; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 707; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 735. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 679; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 708; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 736. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 680; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 709; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 737. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 681; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 710; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 738. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 682; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 711; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 739. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 683; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 712; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 740. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 684; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 713; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 741. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 685; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 714; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 742. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 686; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 715; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 743. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 687; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 716; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 744. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 688; the anti-C3 HCDR2 comprises the amino acid sequence of

SEQ ID NO: 717; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 745. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 689; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 718; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 746. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 690; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 719; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 747. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 691; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 720; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 748. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 692; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 721; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 749. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 693; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 722; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 750. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 694; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 723; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 751. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 695; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 724; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 752. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 696; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 725; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 753. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 697; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 726; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 754. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 698; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 727; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 755. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 699; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 728; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 756. In some

embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 700; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 729; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 757. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 701; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 730; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 758. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 702; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 731; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 759. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 703; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 732; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 760. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 704; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 733; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 761. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 763; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 771; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 778. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 764; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 772; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 779. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 765; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 773; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 780. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 766; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 774; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 781. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 767; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 775; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 782. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 768; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 776; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 783. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 769; the anti-C3 HCDR2

comprises the amino acid sequence of SEQ ID NO: 777; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 784. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 786; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 794; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 801. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 787; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 795; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 802. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 788; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 796; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 803. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 789; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 797; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 804. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 790; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 798; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 805. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 791; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 799; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 806. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 792; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 800; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 807. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 809; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 812; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 815. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 810; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 813; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 816.

[0020] In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 818; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 850; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 881. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 819; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 851; and the anti-C3 LCDR3 comprises the

amino acid sequence of SEQ ID NO: 882. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 820; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 852; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 883. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 821; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 853; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 884. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 822; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 854; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 885. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 823; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 855; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 886. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 824; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 856; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 887. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 825; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 857; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 888. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 826; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 858; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 889. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 827; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 859; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 890. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 828; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 860; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 891. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 829; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 861; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 892. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 830; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 862; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 893. In some embodiments, the anti-C3 LCDR1 comprises the amino

acid sequence of SEQ ID NO: 831; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 863; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 894. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 832; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 864; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 895. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 833; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 865; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 896. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 834; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 866; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 897. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 835; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 867; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 898. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 836; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 868; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 899. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 837; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 869; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 900. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 838; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 870; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 901. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 839; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 871; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 902. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 840; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 872; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 903. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 841; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 873; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 904. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 842; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 874;

and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 905. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 843; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 875; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 906. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 844; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 876; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 907. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 845; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 877; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 908. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 846; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 878; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 909. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 847; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 879; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 910. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 848; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 880; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 911. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 913; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 916; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 919. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 914; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 917; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 920. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 914; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 917; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 920. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 922; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 931; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 940. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 923; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 932; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 941. In some embodiments,

the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 924; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 933; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 942. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 925; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 934; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 943. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 926; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 935; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 944. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 927; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 936; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 945. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 928; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 937; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 946. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 929; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 938; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 947. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 949; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 984; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1019. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 950; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 985; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1020. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 951; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 986; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1021. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 952; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 987; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1022. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 953; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 988; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1023. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 954; the anti-C3 LCDR2 comprises

the amino acid sequence of SEQ ID NO: 989; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1024. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 955; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 990; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1025. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 956; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 991; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1026. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 957; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 992; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1027. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 958; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 993; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1028. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 959; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 994; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1029. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 960; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 995; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1030. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 961; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 996; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1031. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 962; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 997; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1032. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 963; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 998; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1033. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 964; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 999; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1034. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 965; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1000; and the anti-C3 LCDR3 comprises the amino acid sequence of

SEQ ID NO: 1035. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 966; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1001; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1036. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 967; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1002; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1037. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 968; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1003; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1038. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 969; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1004; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1039. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 970; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1005; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1040. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 971; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1006; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1041. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 972; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1007; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1042. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 973; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1008; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1043. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 974; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1009; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1044. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 975; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1010; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1045. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 976; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1011; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1046. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID

NO: 977; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1012; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1047. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 978; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1013; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1048. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 979; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1014; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1049. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 980; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1015; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1050. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 981; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1016; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1051. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 982; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1017; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1052.

[0021] In some embodiments, the anti-CFHR4 VH comprises an amino acid sequence having at least 90% sequence identity to at least one of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380. In some embodiments, the anti-CFHR4 VL comprises an amino acid sequence having at least 90% sequence identity to at least one of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406. In some embodiments, the anti-C3 VH comprises an amino acid sequence having at least 90% (e.g., at least 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or 100%) sequence identity to at least one of SEQ ID NOs: 1127-1200. In some embodiments, the anti-C3 VL comprises an amino acid sequence having at least 90% (e.g., at least 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or 100%) sequence identity to at least one of SEQ ID NOs: 1275-1348.

[0022] In some embodiments, the bispecific antibody binds CFHR4 and/or C3 and reduces complement activation. In some embodiments, the bispecific antibody binds CFHR4b and/or C3b and reduces complement activation. In some embodiments, the bispecific antibody binds human CFHR4 and/or C3 with a K_D of about 100 nM or lower.

[0023] In some embodiments, the bispecific antibody comprises a half-life extension moiety. In some embodiments, the half-life extension moiety comprises a polypeptide that is at least 20

amino acids in length and comprises any combination of G, A, S T, E, and P residues. In some embodiments, the half-life extension polypeptide is attached to the C-terminus or N-terminus of the antibody.

[0024] Embodiments of the present disclosure also include a pharmaceutical composition comprising any of the bispecific antibodies described herein. In some embodiments, the composition is suitable for ocular administration. In some embodiments, ocular administration comprises injection into vitreous fluid. In some embodiments, ocular administration comprises delivering the antibody using a conjunctival insert, a contact lens, a gel, a nanoparticle, a mucoadhesive polymer, an ointment, a solution, a suspension, eye drops, and/or an implant.

[0025] Embodiments of the present disclosure also include a method of treating age-related macular degeneration (AMD) comprising administering a pharmaceutical composition comprising an effective amount of any of the bispecific antibodies described herein to a subject in need thereof. In some embodiments, the pharmaceutical composition is administered ocularly and treats at least one AMD symptom. In some embodiments, AMD comprises wet AMD. In some embodiments, AMD comprises dry AMD. In some embodiments, the AMD symptom comprises visual distortion, reduced central vision, blurred vision, and/or difficulty adapting to low light. In some embodiments, administering the pharmaceutical composition reduces complement activation in the subject's eye. In some embodiments, the pharmaceutical composition is administered at a dose ranging from about 0.0001 mg/dose to about 100 mg/dose. In some embodiments, the pharmaceutical composition is administered at a dose ranging from about 0.0001 mg/ml to about 100 mg/ml.

BRIEF DESCRIPTION OF THE DRAWING(S)

[0026] FIG. 1: Representative illustration of the molecular mechanism underlying treatment of advanced Age-related Macular Degeneration (AMD), including Geographic Atrophy (GA) with the anti-CFHR4 antibodies of the present disclosure.

[0027] FIG. 2: Representing results (see Table 1) plotting Odds Ratio and confidence intervals of haplotype effect when there is a deletion (tagged by one of two variants) or a pQTL variant on Y402 haplotype. The associations were done in relation to the reference haplotype at OR=1.

[0028] FIGS. 3A-3C: Representative ELISA results used to determine antigen positive serum titers of mice immunized with CFHR4, according to three different immunization protocols/cohorts (FIG. 3A – Cohort 1; FIG. 3B – Cohort 2; FIG. 3C – Cohort 3).

[0029] FIG. 4: Representative results of the thermal stabilities of the human CFHR4 monoclonal antibodies of the present disclosure (see Table 2, "ATX" antibodies). Thermal stability was assessed via differential scanning fluorimetry (DSF) utilizing the Protein Thermal Shift (PTS) assay.

[0030] FIGS. 5A-5B: Representative results of CFHR4 antibody cross-blocking experiments, including data from a representative heatmap analyzing the ability of the antibodies to block one another for binding to the antigen (FIG. 5A), and a representative network plot, which progressively groups antibodies with similar competition profiles.

[0031] FIG. 6: Representative results of CFHR4 antibody binding kinetics.

[0032] FIG. 7: Representative results of CFHR4 antibody cross-reactivity with Cynomolgus monkey CFHR4b protein (cCFHR4b).

[0033] FIG. 8: Representative results of CFHR4 antibody cross-reactivity with human CFHR4a protein.

[0034] FIG. 9: Representative results of CFHR4 antibody cross-reactivity with human CFHR3 protein.

[0035] FIG. 10: Representative results of CFHR4 antibody cross-reactivity with human CFHL-1 (Y402H) protein.

[0036] FIGS. 11A-11D: Representative schematic diagram of a C3 convertase assembly assay used to evaluate the ability of the CFHR4 antibodies of the present disclosure to affect C3 convertase formation (FIG. 11A). FIG. 11B includes representative dose response curves for the top inhibitory CFHR4 antibodies, and FIG. 11C includes the IC50 values calculated for each antibody tested in FIG. 11B. FIG. 11D provides a representative summary of data demonstrating at least three functional classes of anti-CFHR4 antibodies.

[0037] FIGS. 12A-12D: Representative ELISA results used to determine antigen positive serum titers of mice immunized with human C3 and cyno C3, according to different immunization protocols/cohorts (Cohort 1: FIG. 12A (human C3) and FIG. 12B (cyno C3); Cohort 2: FIG. 12C (human C3); FIG. 12D (cyno C3)).

[0038] FIG. 13: Representing ELISA results of polyclonal phage pools to confirm enrichment and examine cross reactivity.

[0039] FIG. 14: Representative table containing binding kinetics of the C3 antibodies of the present disclosure.

[0040] FIG. 15: Representative table containing results of C3 antibody cross-reactivity with human C3b protein, Cynomolgus monkey C3 protein, and human C3a protein.

[0041] FIGS. 16A-16B: Representative tables containing binding kinetics of C3 antibodies with respect to human C3 protein (FIG. 16A) and human C3b protein (FIG. 16B).

[0042] FIGS. 17A-17D: Representative results of C3 antibody epitope experiments, including a table containing binning allocations (FIG. 17A), data from a representative heatmap analyzing the ability of the antibodies to block one another for binding to the antigen (FIG. 17B), and representative network plots (FIG. 17C and FIG. 17D), which progressively groups antibodies with similar competition profiles.

[0043] FIGS. 18A-18E: Representative binning network plots based on recombinant human affinities and cyno binding performed with C3b (FIG. 18A); C3b affinity and ligand blocking (FIG. 18B); bins vs. communities for CFHR4b blocking (FIG. 18C); bins vs. communities for CFH blocking (FIG. 18D); and material availability and common vs. diverse light chains (FIG. 18E).

[0044] FIG. 19: Representative results of C3 antibody polyreactivity with baculovirus particles (BVPs).

[0045] FIG. 20: Representative results of C3 antibody polyreactivity with the various proteins indicated.

[0046] FIGS. 21A-21B: Representative results of C3 antibody polyreactivity with CFHR4 (FIG. 21A) and CFH (FIG. 21B).

DETAILED DESCRIPTION

[0047] Embodiments of the present disclosure relate to the treatment and/or prevention of age-related macular degeneration (AMD), including both neovascular AMD ("wet" AMD) and non-neovascular AMD ("dry" AMD), as well as advanced forms of non-neovascular AMD (geographic atrophy or GA). In particular, the present disclosure provides novel therapeutic bispecific antibodies that target components of the alternative pathway of the complement activation system.

[0048] The human complement system comprises a family of proteins that are essential to the human immune response against infections. Complement recognizes microbes or damaged host cells and subsequently triggers an enzymatic cascade that mainly serves to label target cells for phagocytosis by immune cells, produce chemoattractants, and directly kill target cells *via* pore formation. Unwanted complement activation on the body's own cells is a key pathological driver in a wide spectrum of immune diseases including autoimmune, inflammatory, and degenerative diseases. For current and future development of therapeutic complement inhibitors, knowledge of complement activation and how it can be regulated is of great importance.

[0049] Human complement factor H-related protein (CFHR) 4 belongs to the factor H family of plasma glycoproteins that are composed of short consensus repeat (SCR) domains. Although factor H is a well-known inhibitor of the alternative complement pathway, the functions of the CFHR proteins are not as clear. For example, CFHR4 lacks SCRs homologous to the complement inhibitory domains of factor H; however, its complement regulatory activities are not fully understood. Previous studies have shown that CFHR4 binds C-reactive protein via its most N-terminal SCR, which leads to classical complement pathway activation. CFHR4 binds C3b via its C terminus, but the significance of this interaction is not as well understood. Recent reports indicate that CFHR4 may serve as a platform for the assembly of an alternative pathway C3 convertase by binding C3b. This is at least partially based on the sustained ability of CFHR4-bound C3b to bind factor B and properdin, leading to an active convertase that generates C3a and C3b from C3. The CFHR4-C3bBb convertase is less sensitive to the factor H-mediated decay compared with the C3bBb convertase. CFHR4 mutants containing exchanges of conserved residues within the C-terminal C3b-binding site showed significantly reduced C3b binding and alternative pathway complement activation. These initial data suggest that, in contrast to the complement inhibitor factor H, CFHR4 acts as an enhancer of opsonization by promoting complement activation. CFHR4 is detected in human plasma as two different glycoproteins. The 86-kDa long isoform termed CFHR4A consists of nine SCRs. The ~45-kDa shorter isoform termed CFHR4B is composed of five SCRs that represent SCR1 and SCR6–9 of CFHR4A. In CFHR4A, SCR1–4 and SCR5–8 are highly related based on nucleotide and amino acid sequence identity, likely as a result of an intramolecular duplication. Like all CFHRs, both CFHR4 isoforms lack SCRs homologous to the N-terminal complement inhibitory domains SCR1–4 of FH and CFHL1. In agreement with this, no significant cofactor and convertase decay accelerating

activities have been reported for CFHR4B. The two most C-terminal domains of CFHR4A and CFHR4B are homologous to the C-terminal FH domains SCR19–20 that contain C3b/C3d-binding sites. CFHR4B has been shown to bind the C3d region of C3b via its C-terminal SCR4–5. However, except for a slight enhancement of the cofactor activity of FH in the presence of high CFHR4B concentrations, no significant functions have been associated with this C3b binding capacity. The CFHR4A isoform has not yet been characterized for its interaction with C3b and complement regulatory activity.

[0050] Convertase enzymes fulfill a central role in the complement cascade as they cleave C3 and C5, which mediate nearly all complement effector functions. C3 convertases cleave C3 into C3a, a chemoattractant molecule, and C3b, which covalently binds to target surfaces and triggers phagocytosis. C5 convertases cleave C5 into C5a, a potent mediator of leukocyte recruitment and inflammation, and C5b, the initiator of the membrane attack complex and cell lysis. The complement cascade begins *via* specific recognition of target cells in the classical (CP) and lectin (LP) pathways. In the CP, antibodies bind epitopes on the target cell and subsequently recruit the C1 complex ($C1qr_2s_2$). Upon binding to the antibody platforms, C1q-associated protease C1s converts C4 and C2 to generate a C3 convertase enzyme (C4b2a) on the cell surface. Similarly, the lectin pathway also forms C4b2a *via* activation of mannose-binding lectin-associated serine proteases. The resulting CP/LP C4b2a convertases cleave C3 into C3a and C3b. Following cleavage, a reactive thioester in C3b is exposed, which enables its covalent attachment to target cell surfaces, leading to recognition of the cells by phagocytes. The labeling of target cells with C3b is amplified by the alternative pathway (AP) in which surface-bound C3b binds factor B (FB). The proconvertase C3bB is then cleaved by factor D (FD) to form an active C3 convertase complex that consists of C3b and the protease fragment Bb (C3bBb). Since the resulting active AP C3 convertase (C3bBb) is comprised of C3b itself, substrate cleavage results in generation of additional convertases, further propagating C3b deposition. When the density of C3b molecules on the cell surface becomes sufficiently high, the existing C3 convertases (C4b2a and C3bBb) gain the ability to cleave C5, leading to formation of C5a and C5b.

[0051] Age-related macular degeneration (AMD) is a progressive retinal disease in which the early stage is characterized by relatively few small drusen within the macula. When AMD progresses, drusen size and number increase, eventually leading towards more advanced stages of AMD. Two forms of advanced AMD are distinguished. The first form, neovascular AMD, is

characterized by infiltration of abnormal blood vessels into the retina. These newly formed vessels are fragile and when they break, the leakage of blood constituents in the retina leads to sudden vision loss. The second form of advanced AMD, geographic atrophy (GA), is the result of gradual degeneration of the RPE and photoreceptors cells. Although neovascularization occurs in only 15–20% of AMD cases, it is responsible for the vast majority of vision loss caused by AMD. Drugs targeting vascular endothelial growth factor (VEGF), one of the central molecules in neovascularization, have proven to be very successful in neovascular AMD. However, no treatment is available for the remaining majority of early, intermediate or geographic atrophy AMD cases, and furthermore there are no effective means of preventing progression of early to advanced stages. Although it is known that AMD is the result of a complex interaction of environmental and genetic risk factors, studies into the molecular constituents of drusen suggest that AMD may have an immunological component. This suggestion arose after proteins involved in inflammation and/or other immune-associated responses, including components of the complement system, were found within drusen. Additionally, there are currently no treatments that address both wet and dry forms of AMD in a single biologic molecule.

[0052] In light of this, the embodiments of the present disclosure provide a therapeutic platform based on modulating different aspects of the complement activation pathway using bispecific antibodies targeting CFHR4 and C3. As described further herein, the bispecific antibodies of the present disclosure include an antigen binding site directed against CFHR4 and an antigen binding site directed against C3. Such antigen binding sites are described herein, and also in International PCT Appln. No. PCT/US2023/020351, and U.S. Provisional Patent Appln. Serial No. US 63/462,638, both of which are incorporated herein by reference in their entireties and for all purposes.

Definitions

[0053] To facilitate an understanding of the present technology, a number of terms and phrases are defined below. Additional definitions are set forth throughout the detailed description.

[0054] The use of the terms "a" and "an" and "the" and "at least one" and similar referents in the context of describing the embodiments of the present disclosure (especially in the context of the following claims) are to be construed to cover both the singular and the plural, unless otherwise indicated herein or clearly contradicted by context. The use of the term "at least one" followed by a list of one or more items (for example, "at least one of A and B") is to be construed to mean one

item selected from the listed items (A or B) or any combination of two or more of the listed items (A and B), unless otherwise indicated herein or clearly contradicted by context. The terms "comprising," "having," "including," and "containing" are to be construed as open-ended terms (i.e., meaning "including, but not limited to,") unless otherwise noted. Recitation of ranges of values herein are merely intended to serve as a shorthand method of referring individually to each separate value falling within the range, unless otherwise indicated herein, and each separate value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., "such as") provided herein, is intended merely to better illuminate the various embodiments of the present disclosure, and does not pose a limitation on the scope of these embodiment unless otherwise claimed. No language in the specification should be construed as indicating any non-claimed element as essential to the practice of the various embodiments of the present disclosure.

[0055] As used herein, the term "or" is an inclusive "or" operator and is equivalent to the term "and/or" unless the context clearly dictates otherwise. The term "based on" is not exclusive and allows for being based on additional factors not described, unless the context clearly dictates otherwise. In addition, throughout the specification, the meaning of "a," "an," and "the" include plural references. The meaning of "in" includes "in" and "on."

[0056] The transitional phrase "consisting essentially of" as used in claims in the present application limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention, as discussed in *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). For example, a composition "consisting essentially of" recited elements may contain an unrecited contaminant at a level such that, though present, the contaminant does not alter the function of the recited composition as compared to a pure composition, i.e., a composition "consisting of" the recited components.

[0057] The term "one or more," as used herein, refers to a number higher than one. For example, the term "one or more" encompasses any of the following: two or more, three or more, four or more, five or more, six or more, seven or more, eight or more, nine or more, ten or more, eleven or more, twelve or more, thirteen or more, fourteen or more, fifteen or more, twenty or more, fifty or more, 100 or more, or an even greater number.

[0058] The term "one or more but less than a higher number," "two or more but less than a higher number," "three or more but less than a higher number," "four or more but less than a higher number," "five or more but less than a higher number," "six or more but less than a higher number," "seven or more but less than a higher number," "eight or more but less than a higher number," "nine or more but less than a higher number," "ten or more but less than a higher number," "eleven or more but less than a higher number," "twelve or more but less than a higher number," "thirteen or more but less than a higher number," "fourteen or more but less than a higher number," or "fifteen or more but less than a higher number" is not limited to a higher number. For example, the higher number can be 10,000, 1,000, 100, 50, etc. For example, the higher number can be approximately 50 (e.g., 50, 49, 48, 47, 46, 45, 44, 43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 32, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3 or 2).

[0059] The term "immunoglobulin" or "antibody," as used herein, refers to a protein that is found in blood or other bodily fluids of vertebrates, which is used by the immune system to identify and neutralize foreign objects, such as bacteria and viruses. Typically, an immunoglobulin or antibody is a protein that comprises at least one complementarity determining region (CDR). The CDRs form the "hypervariable region" of an antibody, which is responsible for antigen binding (discussed further below). A whole antibody typically consists of four polypeptides: two identical copies of a heavy (H) chain polypeptide and two identical copies of a light (L) chain polypeptide. Each of the heavy chains contains one N-terminal variable (V_H) region and three C-terminal constant (C_{H1}, C_{H2}, and C_{H3}) regions, and each light chain contains one N-terminal variable (V_L) region and one C-terminal constant (C_L) region. The light chains of antibodies can be assigned to one of two distinct types, either kappa (κ) or lambda (λ), based upon the amino acid sequences of their constant domains. In a typical antibody, each light chain is linked to a heavy chain by disulfide bonds, and the two heavy chains are linked to each other by disulfide bonds. The light chain variable region is aligned with the variable region of the heavy chain, and the light chain constant region is aligned with the first constant region of the heavy chain. The remaining constant regions of the heavy chains are aligned with each other.

[0060] The variable regions of each pair of light and heavy chains form the antigen binding site of an antibody. The V_H and V_L regions have the same general structure, with each region comprising four framework (FW or FR) regions. The term "framework region," as used herein,

refers to the relatively conserved amino acid sequences within the variable region which are located between the CDRs. There are four framework regions in each variable domain, which are designated FR1, FR2, FR3, and FR4. The framework regions form the β sheets that provide the structural framework of the variable region (see, e.g., C. A. Janeway et al. (eds.), *Immunobiology*, 5th Ed., Garland Publishing, New York, N.Y. (2001)).

[0061] The framework regions are connected by three CDRs. As discussed above, the three CDRs, known as CDR1, CDR2, and CDR3, form the "hypervariable region" of an antibody, which is responsible for antigen binding. The CDRs form loops connecting, and in some cases comprising part of, the beta-sheet structure formed by the framework regions. While the constant regions of the light and heavy chains are not directly involved in binding of the antibody to an antigen, the constant regions can influence the orientation of the variable regions. The constant regions also exhibit various effector functions, such as participation in antibody-dependent complement-mediated lysis or antibody-dependent cellular toxicity via interactions with effector molecules and cells.

[0062] As used herein, when an antibody or other entity (e.g., antigen binding domain) "specifically recognizes" or "specifically binds" an antigen or epitope, it preferentially recognizes the antigen in a complex mixture of proteins and/or macromolecules, and binds the antigen or epitope with affinity which is substantially higher than to other entities not displaying the antigen or epitope. In this regard, "affinity which is substantially higher" means affinity that is high enough to enable detection of an antigen or epitope which is distinguished from entities using a desired assay or measurement apparatus. Typically, it means binding affinity having a binding constant (K_a) of at least 10^7 M^{-1} (e.g., $>10^7$ M^{-1}, $>10^8$ M^{-1}, $>10^9$ M^{-1}, $>10^{10}$ M^{-1}, $>10^{11}$ M^{-1}, $>10^{12}$ M^{-1}, $>10^{13}$ M^{-1}, etc.). In certain such embodiments, an antibody is capable of binding different antigens so long as the different antigens comprise that particular epitope. In certain instances, for example, homologous proteins from different species may comprise the same epitope.

[0063] The terms "fragment of an antibody," "antibody fragment," and "antigen-binding fragment" of an antibody are used interchangeably herein to refer to one or more fragments of an antibody that retain the ability to specifically bind to an antigen (see, generally, Holliger et al., *Nat. Biotech.*, *23*(9): 1126-1129 (2005)). Any antigen-binding fragment of the antibody described herein is within the scope of the present disclosure. The antibody fragment desirably comprises, for example, one or more CDRs, the variable region (or portions thereof), the constant region (or

portions thereof), or combinations thereof. Examples of antibody fragments include, but are not limited to, (i) a Fab fragment, which is a monovalent fragment consisting of the V_L, V_H, C_L, and C_{H1} domains, (ii) a F(ab')2 fragment, which is a bivalent fragment comprising two Fab fragments linked by a disulfide bridge at the hinge region, (iii) a Fv fragment consisting of the V_L and V_H domains of a single arm of an antibody, (iv) a Fab' fragment, which results from breaking the disulfide bridge of an F(ab')2 fragment using mild reducing conditions, (v) a disulfide-stabilized Fv fragment (dsFv), and (vi) a domain antibody (dAb), which is an antibody single variable region domain (V_H or V_L) polypeptide that specifically binds antigen.

[0064] The term "monoclonal antibody," as used herein, refers to an antibody produced by a single clone of B lymphocytes that is directed against a single epitope on an antigen. Monoclonal antibodies typically are produced using hybridoma technology, as first described in Köhler and Milstein, *Eur. J. Immunol.*, *5*: 511-519 (1976). Monoclonal antibodies may also be produced using recombinant DNA methods (see, e.g., U.S. Patent 4,816,567), isolated from phage display antibody libraries (see, e.g., Clackson et al. *Nature*, *352*: 624-628 (1991)); and Marks et al., *J. Mol. Biol.*, *222*: 581-597 (1991)), or produced from transgenic mice carrying a fully human immunoglobulin system (see, e.g., Lonberg, *Nat. Biotechnol.*, *23*(9): 1117-25 (2005), and Lonberg, *Handb. Exp. Pharmacol.*, *181*: 69-97 (2008)). In contrast, "polyclonal" antibodies are antibodies that are secreted by different B cell lineages within an animal. Polyclonal antibodies are a collection of immunoglobulin molecules that recognize multiple epitopes on the same antigen.

[0065] The terms "peptide," "polypeptide," and "protein" are used interchangeably herein and refer to a polymeric form of amino acids of any length, which can include coded and non-coded amino acids, chemically or biochemically modified or derivatized amino acids, and polypeptides having modified peptide backbones.

[0066] The terms "nucleic acid," "polynucleotide," "nucleotide sequence," and "oligonucleotide" are used interchangeably herein and refer to a polymer or oligomer of pyrimidine and/or purine bases, preferably cytosine, thymine, and uracil, and adenine and guanine, respectively (See Albert L. Lehninger, *Principles of Biochemistry*, at 793-800 (Worth Pub. 1982)). The terms encompass any deoxyribonucleotide, ribonucleotide, or peptide nucleic acid component, and any chemical variants thereof, such as methylated, hydroxymethylated, or glycosylated forms of these bases. The polymers or oligomers may be heterogenous or homogenous in composition, may be isolated from naturally occurring sources, or may be

artificially or synthetically produced. In addition, the nucleic acids may be DNA or RNA, or a mixture thereof, and may exist permanently or transitionally in single-stranded or double-stranded form, including homoduplex, heteroduplex, and hybrid states. In some embodiments, a nucleic acid or nucleic acid sequence comprises other kinds of nucleic acid structures such as, for instance, a DNA/RNA helix, peptide nucleic acid (PNA), morpholino nucleic acid (see, e.g., Braasch and Corey, *Biochemistry*, *41*(14): 4503-4510 (2002) and U.S. Patent 5,034,506), locked nucleic acid (LNA; see Wahlestedt et al., *Proc. Natl. Acad. Sci. U.S.A.*, *97*: 5633-5638 (2000)), cyclohexenyl nucleic acids (see Wang, *J. Am. Chem. Soc.*, *122*: 8595-8602 (2000)), and/or a ribozyme. The terms "nucleic acid" and "nucleic acid sequence" may also encompass a chain comprising non-natural nucleotides, modified nucleotides, and/or non-nucleotide building blocks that can exhibit the same function as natural nucleotides (e.g., "nucleotide analogs").

[0067] The terms "complementary" and "complementarity" refer to nucleotides (e.g., 1 nucleotide) or polynucleotides (e.g., a sequence of nucleotides) related by the base-pairing rules. For example, the sequence 5'-A-G-T-3' is complementary to the sequence 3'-T-C-A-5'. Complementarity may be "partial," in which only some of the nucleic acids' bases are matched according to the base pairing rules. Or, there may be "complete" or "total" complementarity between the nucleic acids. The degree of complementarity between nucleic acid strands affects the efficiency and strength of hybridization between nucleic acid strands. This is of particular importance in amplification reactions and in detection methods that depend upon binding between nucleic acids.

[0068] The term "gene" refers to a nucleic acid (e.g., DNA or RNA) sequence that comprises coding sequences necessary for the production of an RNA, or of a polypeptide or its precursor. A functional polypeptide can be encoded by a full-length coding sequence or by any portion of the coding sequence as long as the desired activity or functional properties (e.g., enzymatic activity, ligand binding, signal transduction, etc.) of the polypeptide are retained. The term "portion" when used in reference to a gene refers to fragments of that gene. The fragments may range in size from a few nucleotides to the entire gene sequence minus one nucleotide. Thus, "a nucleotide comprising at least a portion of a "gene" may comprise fragments of the gene or the entire gene.

[0069] The term "gene" also encompasses the coding regions of a structural gene and includes sequences located adjacent to the coding region on both the 5' and 3' ends, e.g., for a distance of about 1 kb on either end, such that the gene corresponds to the length of the full-length mRNA

(e.g., comprising coding, regulatory, structural and other sequences). The sequences that are located 5' of the coding region and that are present on the mRNA are referred to as 5' non-translated or untranslated sequences. The sequences that are located 3' or downstream of the coding region and that are present on the mRNA are referred to as 3' non-translated or 3' untranslated sequences. The term "gene" encompasses both cDNA and genomic forms of a gene. In some organisms (e.g., eukaryotes), a genomic form or clone of a gene contains the coding region interrupted with non-coding sequences termed "introns" or "intervening regions" or "intervening sequences." Introns are segments of a gene that are transcribed into nuclear RNA (hnRNA); introns may contain regulatory elements such as enhancers. Introns are removed or "spliced out" from the nuclear or primary transcript; introns therefore are absent in the messenger RNA (mRNA) transcript. The mRNA functions during translation to specify the sequence or order of amino acids in a nascent polypeptide.

[0070] In addition to containing introns, genomic forms of a gene may also include sequences located on both the 5' and 3' ends of the sequences that are present on the RNA transcript. These sequences are referred to as "flanking" sequences or regions (these flanking sequences are located 5' or 3' to the non-translated sequences present on the mRNA transcript). The 5' flanking region may contain regulatory sequences such as promoters and enhancers that control or influence the transcription of the gene. The 3' flanking region may contain sequences that direct the termination of transcription, posttranscriptional cleavage, and polyadenylation.

[0071] The term "wild-type" when made in reference to a gene refers to a gene that has the characteristics of a gene isolated from a naturally occurring source. The term "wild-type" when made in reference to a gene product refers to a gene product that has the characteristics of a gene product isolated from a naturally occurring source. The term "wild-type" when made in reference to a protein refers to a protein that has the characteristics of a naturally occurring protein. The term "naturally-occurring" as applied to an object refers to the fact that an object can be found in nature. For example, a polypeptide or polynucleotide sequence that is present in an organism (including viruses) that can be isolated from a source in nature, and which has not been intentionally modified by the hand of a person in the laboratory is naturally-occurring. A wild-type gene is often that gene or allele that is most frequently observed in a population and is thus arbitrarily designated the "normal" or "wild-type" form of the gene. In contrast, the term "modified" or "mutant" when made in reference to a gene or to a gene product refers, respectively, to a gene or to a gene product that

displays modifications in sequence and/or functional properties (e.g., altered characteristics) when compared to the wild-type gene or gene product. It is noted that naturally-occurring mutants can be isolated; these are identified by the fact that they have altered characteristics when compared to the wild-type gene or gene product.

[0072] The term "allele" refers to a variation of a gene; the variations include but are not limited to variants and mutants, polymorphic loci, and single nucleotide polymorphic loci, frameshift, and splice mutations. An allele may occur naturally in a population, or it might arise during the lifetime of any particular individual of the population.

[0073] Thus, the terms "variant" and "mutant" when used in reference to a nucleotide sequence refer to a nucleic acid sequence that differs by one or more nucleotides from another, usually related, nucleotide acid sequence. A "variation" is a difference between two different nucleotide sequences; typically, one sequence is a reference sequence.

[0074] Nucleic acid or amino acid sequence "identity," as described herein, can be determined by comparing a nucleic acid or amino acid sequence of interest to a reference nucleic acid or amino acid sequence. A number of mathematical algorithms for obtaining the optimal alignment and calculating identity between two or more sequences are known and incorporated into a number of available software programs. Examples of such programs include CLUSTAL-W, T-Coffee, and ALIGN (for alignment of nucleic acid and amino acid sequences), BLAST programs (e.g., BLAST 2.1, BL2SEQ, and later versions thereof) and FASTA programs (e.g., FASTA3x, FAST™, and SSEARCH) (for sequence alignment and sequence similarity searches). Sequence alignment algorithms also are disclosed in, for example, Altschul et al., *J. Molecular Biol.*, *215*(3): 403-410 (1990), Beigert et al., *Proc. Natl. Acad. Sci. USA*, *106*(10): 3770-3775 (2009), Durbin et al., eds., *Biological Sequence Analysis: Probabilistic Models of Proteins and Nucleic Acids*, Cambridge University Press, Cambridge, UK (2009), Soding, *Bioinformatics*, *21*(7): 951-960 (2005), Altschul et al., *Nucleic Acids Res.*, *25*(17): 3389-3402 (1997), and Gusfield, *Algorithms on Strings, Trees and Sequences*, Cambridge University Press, Cambridge UK (1997)).

[0075] As would be recognized by one of ordinary skill in the art based on the present disclosure, one or more amino acids of the aforementioned bispecific antibodies, or antigen fragments thereof, can be replaced or substituted with a different amino acid. An amino acid "replacement" or "substitution" refers to the replacement of one amino acid at a given position or residue by another amino acid at the same position or residue within a polypeptide sequence.

Amino acids are broadly grouped as "aromatic" or "aliphatic." An aromatic amino acid includes an aromatic ring. Examples of "aromatic" amino acids include histidine (H or His), phenylalanine (F or Phe), tyrosine (Y or Tyr), and tryptophan (W or Trp). Non-aromatic amino acids are broadly grouped as "aliphatic." Examples of "aliphatic" amino acids include glycine (G or Gly), alanine (A or Ala), valine (V or Val), leucine (L or Leu), isoleucine (I or Ile), methionine (M or Met), serine (S or Ser), threonine (T or Thr), cysteine (C or Cys), proline (P or Pro), glutamic acid (E or Glu), aspartic acid (A or Asp), asparagine (N or Asn), glutamine (Q or Gln), lysine (K or Lys), and arginine (R or Arg). Aliphatic amino acids may be sub-divided into four sub-groups. The "large aliphatic non-polar sub-group" consists of valine, leucine, and isoleucine. The "aliphatic slightly-polar sub-group" consists of methionine, serine, threonine, and cysteine. The "aliphatic polar/charged sub-group" consists of glutamic acid, aspartic acid, asparagine, glutamine, lysine, and arginine. The "small-residue sub-group" consists of glycine and alanine. The group of charged/polar amino acids may be sub-divided into three sub-groups: the "positively-charged sub-group" consisting of lysine and arginine, the "negatively-charged sub-group" consisting of glutamic acid and aspartic acid, and the "polar sub-group" consisting of asparagine and glutamine. Aromatic amino acids may be sub-divided into two sub-groups: the "nitrogen ring sub-group" consisting of histidine and tryptophan and the "phenyl sub-group" consisting of phenylalanine and tyrosine.

[0076] The amino acid replacement or substitution can be conservative, semi-conservative, or non-conservative. The phrase "conservative amino acid substitution" or "conservative mutation" refers to the replacement of one amino acid by another amino acid with a common property. A functional way to define common properties between individual amino acids is to analyze the normalized frequencies of amino acid changes between corresponding proteins of homologous organisms (Schulz and Schirmer, *Principles of Protein Structure*, Springer-Verlag, New York (1979)). According to such analyses, groups of amino acids may be defined where amino acids within a group exchange preferentially with each other, and therefore resemble each other most in their impact on the overall protein structure. Examples of conservative amino acid substitutions include substitutions of amino acids within the sub-groups described above, for example, lysine for arginine and vice versa such that a positive charge may be maintained, glutamic acid for aspartic acid and vice versa such that a negative charge may be maintained, serine for threonine such that a free -OH can be maintained, and glutamine for asparagine such that a free -NH_2 can be

maintained. "Semi-conservative mutations" include amino acid substitutions of amino acids within the same groups listed above, but not within the same sub-group. For example, the substitution of aspartic acid for asparagine, or asparagine for lysine, involves amino acids within the same group, but different sub-groups. "Non-conservative mutations" involve amino acid substitutions between different groups, for example, lysine for tryptophan, or phenylalanine for serine, etc.

[0077] In addition, one or more amino acids can be inserted into the bispecific antibodies of the present disclosure (e.g., insertion into the heavy and/or light chain variable region amino acid sequence). Any number of suitable amino acids can be inserted into the amino acid sequence of the antibody or antigen-binding fragment thereof. In this respect, at least one amino acid (e.g., 2 or more, 5 or more, or 10 or more amino acids), but not more than 20 amino acids (e.g., 18 or less, 15 or less, or 12 or less amino acids), can be inserted into the amino acid sequence of the antibody or antigen-binding fragment thereof. For example, 1-10 amino acids (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10 amino acids) may be inserted into the amino acid sequence of the monoclonal antibody or antigen-binding fragment thereof. In this respect, the amino acid(s) can be inserted into an antibody or antigen-binding fragment thereof in any suitable location. Preferably, the amino acid(s) are inserted into a CDR (e.g., CDR1, CDR2, or CDR3) of the antibody or antigen-binding fragment thereof.

[0078] The terms "immunogen" and "antigen" are used interchangeably herein and refer to any molecule, compound, or substance that induces an immune response in an animal (e.g., a mammal). An "immune response" can entail, for example, antibody production and/or the activation of immune effector cells. An antigen in the context of the disclosure can comprise any subunit, fragment, or epitope of any proteinaceous or non-proteinaceous (e.g., carbohydrate or lipid) molecule that provokes an immune response in a mammal. The term "epitope" refers to a sequence of an antigen that is recognized by an antibody or an antigen receptor. Epitopes also are referred to in the art as "antigenic determinants." In certain embodiments, an epitope is a region of an antigen that is specifically bound by an antibody. In certain embodiments, an epitope may include chemically active surface groupings of molecules such as amino acids, sugar side chains, phosphoryl, or sulfonyl groups. In certain embodiments, an epitope may have specific three-dimensional structural characteristics (e.g., a "conformational" epitope) and/or specific charge characteristics. The antigen can be a protein or peptide of viral, bacterial, parasitic, fungal,

protozoan, prion, cellular, or extracellular origin, which provokes an immune response in a mammal, preferably leading to protective immunity.

[0079] A "pharmaceutically acceptable carrier" as used herein generally refers to an ingredient in a pharmaceutical formulation, other than an active ingredient, which is nontoxic to a subject. A pharmaceutically acceptable carrier includes, but is not limited to, a buffer, excipient, stabilizer, or preservative.

[0080] The term "pharmaceutical formulation" as used herein generally refers to a preparation which is in such form as to permit the biological activity of an active ingredient (e.g., bispecific antibodies of the present disclosure) contained therein to be effective, and which contains no additional components which are unacceptably toxic to a subject to which the formulation would be administered.

[0081] As used herein, "treatment" (and grammatical variations thereof such as "treat" or "treating") generally refers to clinical intervention in an attempt to alter the natural course of the individual being treated, and can be performed either for prophylaxis or during the course of clinical pathology. Desirable effects of treatment include, but are not limited to, preventing occurrence or recurrence of disease, alleviation of symptoms, diminishment of any direct or indirect pathological consequences of the disease, preventing metastasis, decreasing the rate of disease progression, amelioration or palliation of the disease state, and remission or improved prognosis. In some embodiments, bispecific antibodies of the present disclosure or other compositions that include a bispecific antibody of the present disclosure (e.g., an antibody conjugate, a fusion protein, or a polymeric formulation) are used to delay development of a disease or to slow the progression of a disease.

[0082] The term "half-life" as used herein generally refers to the time required for the concentration of a substance (e.g., a bispecific antibody, an antibody conjugate, a fusion protein (e.g., a Fab fusion protein), or a polymeric formulation) to decrease by one-half, in vivo (e.g., in the eye (e.g., the vitreous)) or in vitro.

[0083] An "effective amount" of an agent, e.g., a pharmaceutical formulation, as used herein generally refers to an amount effective, at dosages and for periods of time necessary, to achieve the desired therapeutic or prophylactic result.

[0084] An "individual" or "subject" is a mammal. Mammals include, but are not limited to, domesticated animals (e.g., cows, sheep, cats, dogs, and horses), primates (e.g., humans and non-

human primates such as monkeys), rabbits, and rodents (e.g., mice and rats). In certain embodiments, the individual or subject is a human. A "subject" may be a "patient."

Anti-CFHR4/Anti-C3 Bispecific Antibodies

[0085] As described further herein, embodiments of the present disclosure relate to the treatment and/or prevention of age-related macular degeneration (AMD), including both neovascular AMD ("wet" AMD) and non-neovascular AMD ("dry" AMD), as well as advanced forms of non-neovascular AMD (geographic atrophy or GA). In particular, the present disclosure provides novel therapeutic bispecific antibodies that target components of the alternative pathway of the complement activation system to treat AMD. As described further herein, anti-CFHR4 antibodies and anti-C3 were generated, and their structural and functional properties were elucidated. Based on these data, corresponding bispecific antibodies were generated in which one antigen-binding site is directed against CFHR4 and the other antigen-binding site is directed against C3.

[0086] In accordance with these embodiments, the present disclosure provides a bispecific antibody, or an antigen binding fragment thereof, which specifically binds human Complement Factor H Related 4 (CFHR) and/or human Complement Component 3 (C3). In some embodiments, the human CFHR4 is the CFHR4 b variant (CFHR4b), which is optionally a polypeptide comprising or consisting of the amino acid sequence of SEQ ID NO: 580. As such, the bispecific antibodies of the present disclosure are capable of binding CFHR4 and/or CFHR4B polypeptides and proteins. In some embodiments, the human C3 is the b variant of C3 (C3b), which is optionally a polypeptide comprising or consisting of the amino acid sequence of SEQ ID NO: 1645. As such, the bispecific antibodies of the present disclosure are capable of binding Complement Component 3 (C3), Complement Component 3a (C3a), and/or Complement Component 3b (C3b) polypeptides and proteins.

[0087] In some embodiments, the bispecific antibody or fragment thereof is monoclonal, optionally recombinant. In some embodiments, the bispecific antibody or fragment thereof is human, humanized, or chimeric. In some embodiments, the bispecific antibody or fragment thereof is a full length antibody, a single chain antibody, a single chain variable fragment (scFv), a variable fragment (Fv), a fragment antigen-binding region (Fab), a Fab-C, a Fab'-SH, a (Fab')2, a single-domain antibody (sdAb), a VHH antibody, a nanobody, a camelid-derived single-domain antibody, a shark IgNAR-derived single-domain antibody fragment (VNAR), a diabody, a triabody, an

anticalin or an aptamer, optionally wherein the antibody is a full length antibody comprising an Fc region such as a human IgG1, IgG2, IgG3 or IgG4 region.

[0088] In some embodiments, the bispecific antibody or fragment thereof is conjugated to at least one additional moiety, optionally selected from: an antigen binding moiety, such as an antibody or antigen-binding fragment thereof, which is capable of specific binding to a target which is not human CFHR4 or human C3, preferably wherein said target is expressed in the human eye; a therapeutic or cytotoxic moiety; a detection moiety; a purification moiety; a half-life extension moiety, optionally a polypeptide that is at least 20 amino acids in length and comprises any combination of G, A, S T, E, and P residue, which polypeptide is conjugated to the C- or N-terminus of the antibody.

[0089] In some embodiments, the bispecific antibody or fragment thereof is a polypeptide comprising: one, two or all three HCDRs of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 3; and one, two or all three of the corresponding LCDRs of said exemplary antibody; and/or a VH sequence having at least 90% identity to the VH sequence of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 4; and optionally a VL sequence having at least 90% identity to the corresponding VL sequence of said exemplary antibody, preferably wherein variation is not permitted in the HCDRs or LCDRs; and/or all six CDRs of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 3; the VH and VL sequences of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 4; and/or the full length heavy chain (VH + constant) sequence of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 5; and optionally the corresponding full length light chain (VL + constant) sequence of said exemplary antibody.

[0090] In some embodiments, the bispecific antibody or fragment thereof is a polypeptide comprising: one, two or all three HCDRs of any one of the exemplary C3 antibodies the sequences of which are provided in Table 6; and one, two or all three of the corresponding LCDRs of said exemplary antibody; and/or a VH sequence having at least 90% identity to the VH sequence of any one of the exemplary C3 antibodies the sequences of which are provided in Table 7; and optionally a VL sequence having at least 90% identity to the corresponding VL sequence of said exemplary antibody provided in Table 8, preferably wherein variation is not permitted in the HCDRs or LCDRs; and/or all six CDRs of any one of the exemplary C3 antibodies the sequences

of which are provided in Table 6; the VH and VL sequences of any one of the exemplary C3 antibodies the sequences of which are provided in Tables 7 and 8; and/or the full length heavy chain (VH + constant) sequence of any one of the exemplary C3 antibodies the sequences of which are provided in Table 9; and optionally the corresponding full length light chain (VL + constant) sequence of said exemplary antibody provided in Table 10.

[0091] Embodiments of the present disclosure also include a polynucleotide encoding the bispecific antibody or fragment thereof. In some embodiments, the polynucleotide comprises or consists of a nucleic acid sequence having at least 70%, 80%, 90%, or 100% identity to a nucleic acid sequence of any one of the exemplary antibodies the sequences of which are provided in Tables 5, 9, and 10. Embodiments of the present disclosure also include an expression vector comprising the polynucleotide, which is optionally an adeno-associated virus (AAV) vector, a lentiviral (LV) vector, a herpes simplex virus (HSV) vector, or a retrovirus vector.

[0092] Embodiments of the present disclosure also include a pharmaceutical composition comprising the bispecific antibody or fragment thereof, the corresponding polynucleotide, or the vector comprising the polynucleotide. In some embodiments, the composition comprises at least one pharmaceutically acceptable carrier, diluent or preservative; and/or at least one additional active ingredient. In some embodiments, the pharmaceutical composition is suitable for ocular administration to a subject, optionally by delivery using a conjunctival insert, a contact lens, a gel, a nanoparticle, a mucoadhesive polymer, an ointment, a solution, a suspension, eye drops, and/or an implant, preferably by injection into the vitreous fluid.

[0093] Embodiments of the present disclosure also include the bispecific antibody or fragment thereof, the corresponding polynucleotide, the vector comprising the polynucleotide, or the pharmaceutical composition, for use as a medicament, optionally for use in a method of treating a disease of the eye in a subject. In some embodiments, the disease is characterized by increased activation of the complement system, in particular the alternative pathway, and in particular within the eye of the subject, for example in drusen or retinal pigment epithelium (RPE) cells of the subject. In some embodiments, the method comprises ocular administration of the antibody, preferably by injection into the vitreous fluid, and said administration preferably relieves at least one symptom in the subject selected from visual distortion, reduced central vision, blurred vision, and/or difficulty adapting to low light. In some embodiments, the disease is age-related macular

degeneration (AMD), including dry AMD, which may be at an early, intermediate or advanced stage (the latter otherwise known as geographic atrophy, GA).

[0094] In accordance with the above, embodiments of the present disclosure include a bispecific antibody comprising a first antigen-binding site directed against Complement Factor H Related 4 (CFHR4) and a second antigen-binding site directed against Complement Component 3 (C3). In some embodiments, the first anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406; and the second anti-C3 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3.

[0095] Embodiments of the present disclosure include a bispecific antibody comprising a first antigen-binding site directed against Complement Factor H Related 4 (CFHR4) and a second antigen-binding site directed against Complement Component 3 (C3). In some embodiments, the first anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3; and the second anti-C3 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 1127-1200; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 1275-1348.

[0096] Embodiments of the present disclosure include a bispecific antibody comprising a first antigen-binding site directed against Complement Factor H Related 4 (CFHR4) and a second antigen-binding site directed against Complement Component 3 (C3). In some embodiments, the first anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380; and a light chain variable region (VL)

comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406; and the second anti-C3 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 1127-1200; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 1275-1348.

[0097] In some embodiments, the bispecific antibodies of the present disclosure comprise an anti-CFHR4 VH that comprises an amino acid sequence having at least 90% sequence identity to at least one of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380. In some embodiments, the bispecific antibodies of the present disclosure comprise an anti-CFHR4 VL that comprises an amino acid sequence having at least 90% sequence identity to at least one of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406.

[0098] In accordance with these embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 2; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 9; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 15. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 3; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 10; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 16. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 4; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 11; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 17. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 5; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 12; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 18. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 6; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 13; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 19. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 7; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 14; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 20. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 22; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 33; and

the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 43. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 23; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 34; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 44. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 24; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 35; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 45. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 25; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 36; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 46. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 26; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 37; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 47. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 27; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 38; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 48. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 28; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 39; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 49. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 29; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 40; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 50. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 30; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 41; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 51. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 31; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 42; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 52. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 54; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 66; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 77. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 55; the anti-CFHR4 HCDR2 comprises the amino acid sequence of

SEQ ID NO: 67; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 78. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 56; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 68; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 79. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 57; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 69; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 80. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 58; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 70; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 81. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 59; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 71; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 82. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 60; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 72; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 83. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 61; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 73; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 84. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 62; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 74; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 85. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 63; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 75; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 86. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 64; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 76; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 87. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 89; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 103; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 116. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 90; the anti-CFHR4 HCDR2 comprises the

amino acid sequence of SEQ ID NO: 104; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 117. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 91; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 105; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 118. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 92; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 106; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 119. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 93; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 107; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 120. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 94; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 108; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 121. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 95; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 109; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 122. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 96; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 110; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 123. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 97; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 111; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 124. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 98; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 112; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 125. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 99; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 113; and the HCDR3 comprises the amino acid sequence of SEQ ID NO: 126. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 100; the HCDR2 comprises the amino acid sequence of SEQ ID NO: 114; and the HCDR3 comprises the amino acid sequence of SEQ ID NO: 127. In some embodiments, the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 101; the anti-CFHR4 HCDR2 comprises the

amino acid sequence of SEQ ID NO: 115; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 128.

[0099] In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 130; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 153; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 175. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 131; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 154; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 176. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 132; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 155; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 177. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 133; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 156; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 178. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 134; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 157; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 179. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 135; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 158; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 180. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 136; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 159; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 181. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 137; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 160; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 182. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 138; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 161; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 183. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 139; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 162; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 184. In some

embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 140; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 163; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 185. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 141; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 164; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 186. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 142; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 165; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 187. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 143; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 166; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 188. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 144; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 167; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 189. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 145; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 168; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 190. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 146; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 169; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 191. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 147; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 170; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 192. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 148; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 171; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 193. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 149; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 172; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 194. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 150; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 173; and the anti-CFHR4 LCDR3 comprises

the amino acid sequence of SEQ ID NO: 195. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 151; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 174; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 196. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 198; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 201; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 204. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 199; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 202; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 205. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 207; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 217; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 227. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 208; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 218; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 228. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 209; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 219; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 229. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 210; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 220; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 230. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 211; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 221; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 231. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 212; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 222; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 232. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 213; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 223; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 233. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 214; the anti-CFHR4 LCDR2 comprises the amino acid sequence of

SEQ ID NO: 224; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 234. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 215; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 225; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 235. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 237; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 245; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 253. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 238; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 246; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 254. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 239; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 247; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 255. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 240; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 248; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 256. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 241; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 249; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 257. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 242; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 250; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 258. In some embodiments, the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 243; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 251; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 259.

[00100] In some embodiments, the bispecific antibodies of the present disclosure comprise an anti-C3 VH that comprises an amino acid sequence having at least 90% (e.g., at least 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or 100%) sequence identity to at least one of SEQ ID NOs: 1127-1200. In some embodiments, the bispecific antibodies of the present disclosure comprise an anti-C3 VL that comprises an amino acid sequence having at least 90% (e.g., at least

90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or 100%) sequence identity to at least one of SEQ ID NOs: 1275-1348.

[00101] In accordance with these embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 583; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 602; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 620. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 584; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 603; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 621. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 585; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 604; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 622. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 586; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 605; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 623. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 587; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 606; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 624. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 588; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 607; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 625. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 589; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 608; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 626. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 590; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 609; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 627. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 591; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 610; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 628. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 592; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 611; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 629. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 593; the anti-C3 HCDR2 comprises the amino acid

sequence of SEQ ID NO: 612; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 630. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 594; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 613; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 631. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 595; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 614; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 632. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 596; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 615; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 633. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 597; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 616; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 634. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 598; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 617; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 635. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 599; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 618; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 636. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 600; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 619; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 637. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 639; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 652; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 664. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 640; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 653; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 665. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 641; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 654; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 666. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 642; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 655; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO:

667. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 643; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 656; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 668. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 644; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 657; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 669. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 645; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 658; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 670. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 646; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 659; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 671. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 647; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 660; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 672. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 648; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 661; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 673. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 649; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 662; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 674. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 650; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 663; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 675. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 677; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 706; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 734. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 678; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 707; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 735. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 679; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 708; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 736. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 680; the

anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 709; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 737. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 681; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 710; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 738. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 682; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 711; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 739. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 683; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 712; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 740. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 684; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 713; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 741. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 685; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 714; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 742. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 686; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 715; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 743. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 687; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 716; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 744. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 688; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 717; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 745. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 689; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 718; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 746. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 690; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 719; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 747. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 691; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 720; and the anti-C3 HCDR3 comprises the

amino acid sequence of SEQ ID NO: 748. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 692; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 721; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 749. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 693; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 722; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 750. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 694; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 723; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 751. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 695; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 724; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 752. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 696; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 725; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 753. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 697; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 726; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 754. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 698; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 727; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 755. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 699; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 728; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 756. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 700; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 729; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 757. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 701; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 730; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 758. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 702; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 731; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 759. In some embodiments, the anti-C3 HCDR1 comprises the amino

acid sequence of SEQ ID NO: 703; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 732; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 760. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 704; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 733; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 761. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 763; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 771; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 778. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 764; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 772; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 779. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 765; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 773; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 780. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 766; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 774; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 781. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 767; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 775; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 782. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 768; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 776; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 783. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 769; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 777; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 784. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 786; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 794; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 801. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 787; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 795; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 802. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 788; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 796;

and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 803. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 789; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 797; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 804. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 790; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 798; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 805. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 791; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 799; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 806. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 792; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 800; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 807. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 809; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 812; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 815. In some embodiments, the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 810; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 813; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 816.

[00102] In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 818; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 850; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 881. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 819; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 851; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 882. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 820; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 852; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 883. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 821; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 853; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 884. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 822; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 854; and the anti-C3 LCDR3

comprises the amino acid sequence of SEQ ID NO: 885. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 823; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 855; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 886. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 824; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 856; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 887. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 825; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 857; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 888. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 826; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 858; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 889. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 827; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 859; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 890. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 828; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 860; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 891. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 829; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 861; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 892. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 830; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 862; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 893. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 831; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 863; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 894. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 832; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 864; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 895. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 833; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 865; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 896. In some embodiments, the anti-C3 LCDR1 comprises

the amino acid sequence of SEQ ID NO: 834; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 866; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 897. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 835; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 867; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 898. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 836; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 868; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 899. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 837; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 869; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 900. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 838; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 870; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 901. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 839; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 871; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 902. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 840; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 872; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 903. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 841; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 873; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 904. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 842; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 874; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 905. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 843; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 875; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 906. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 844; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 876; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 907. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 845; the anti-C3 LCDR2 comprises the amino acid sequence of

SEQ ID NO: 877; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 908. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 846; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 878; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 909. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 847; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 879; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 910. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 848; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 880; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 911. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 913; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 916; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 919. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 914; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 917; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 920. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 914; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 917; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 920. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 922; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 931; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 940. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 923; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 932; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 941. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 924; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 933; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 942. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 925; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 934; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 943. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 926; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 935; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 944. In some

embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 927; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 936; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 945. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 928; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 937; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 946. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 929; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 938; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 947. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 949; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 984; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1019. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 950; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 985; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1020. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 951; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 986; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1021. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 952; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 987; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1022. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 953; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 988; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1023. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 954; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 989; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1024. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 955; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 990; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1025. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 956; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 991; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1026. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 957; the anti-C3 LCDR2

comprises the amino acid sequence of SEQ ID NO: 992; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1027. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 958; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 993; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1028. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 959; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 994; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1029. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 960; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 995; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1030. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 961; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 996; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1031. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 962; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 997; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1032. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 963; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 998; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1033. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 964; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 999; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1034. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 965; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1000; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1035. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 966; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1001; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1036. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 967; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1002; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1037. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 968; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1003; and the anti-C3 LCDR3 comprises the amino acid

sequence of SEQ ID NO: 1038. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 969; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1004; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1039. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 970; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1005; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1040. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 971; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1006; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1041. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 972; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1007; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1042. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 973; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1008; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1043. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 974; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1009; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1044. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 975; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1010; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1045. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 976; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1011; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1046. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 977; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1012; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1047. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 978; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1013; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1048. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 979; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1014; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1049. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence

of SEQ ID NO: 980; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1015; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1050. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 981; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1016; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1051. In some embodiments, the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 982; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1017; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1052.

[00103] In some embodiments, the bispecific antibodies of the present disclosure include an anti-C3 antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from any anti-C3 antibody. In some embodiments, a bispecific antibody of the present disclosure includes an anti-CFHR4 antigen-binding site, or an antigen-binding fragment thereof, and an anti-C3 antigen-binding site, or an antigen-binding fragment thereof. Such bispecific antibodies can be used to target the complement activation pathway from two different mechanisms, and thus provide additional therapeutic benefits. In some embodiments, the second anti-C3 antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an NGM621 antibody (or an antigen-binding fragment thereof). NGM621 is a humanized IgG1 monoclonal antibody engineered to inhibit complement C3. In some embodiments, the second anti-C3 antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an anti-C3 antibody, or an antigen-binding fragment thereof, disclosed in U.S. Patent No. 9,815,890 or disclosed in PCT Application No. PCT/US2019/025123, both of which are incorporated herein by reference.

[00104] In other embodiments, the anti-CFHR4 antigen-binding site can be any of the anti-CFHR4 antibodies of the present disclosure, and the anti-C3 arm can be any C3 antagonist, including but not limited to, POT-4 (AL-78898A) and APL-2. POT-4 (AL-78898A) is a synthetic cyclic peptide conjugated to a PEG polymer that binds specifically to C3 (e.g., a compstatin analog); it was the first complement inhibitor to be tested in the treatment of macular degeneration. APL-2 (pegcetacoplan) is a symmetrical molecule comprised of two identical pentadecapeptides covalently bound to the ends of a linear 40-kDa polyethylene glycol molecule; it binds both C3 and C3b.

[00105] In some embodiments, the second anti-C3 antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from any antibody that binds Complement Component 3b (C3b). In some embodiments, the second anti-C3b antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an S77 antibody (or an antigen-binding fragment thereof). S77 is an antibody that selectively recognizes C3b but not the non-activated molecule C3. In some embodiments, the second anti-C3 antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an anti-C3 antibody, or an antigen-binding fragment thereof, disclosed in U.S. Patent No. 8,012,473 or disclosed in PCT Application No. PCT/US2008/065771, both of which are incorporated herein by reference (see also, Katschke, K.J. et al., Journal of Biological Chemistry, 2009, vol. 284(16): 10473-10479).

Anti-C3/Anti-VEGF Bispecific Antibodies

[00106] Embodiments of the present disclosure relate to the treatment and/or prevention of age-related macular degeneration (AMD), including both neovascular AMD ("wet" AMD) and non-neovascular AMD ("dry" AMD), as well as advanced forms of non-neovascular AMD (geographic atrophy or GA). In some embodiments, the present disclosure provides novel therapeutic bispecific antibodies that target components of the alternative pathway of the complement activation system and the Vascular Endothelial Growth Factor (VEGF) signaling pathway to treat AMD. As described further herein, embodiments of the present disclosure also include a bispecific antibody comprising an antigen-binding site directed against CFHR4 or C3, and an antigen-binding site directed against VEGF. In accordance with these embodiments, the anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from one or more of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from one or more of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406; and the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an anti-VEGF antibody. In some embodiments, the anti-C3 antigen binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from one or more of SEQ ID NOs: 1127-1200; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from one

or more of SEQ ID NOs: 1275-1348; and the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an anti-VEGF antibody.

[00107] In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from any anti-VEGF antibody. In some embodiments, a bispecific antibody of the present disclosure includes an anti-CFHR4 antigen-binding site, or an antigen-binding fragment thereof, and an anti-VEGF antigen-binding site, or an antigen-binding fragment thereof. Such bispecific antibodies can be used to treat AMD via inhibition of the complement activation pathway and inhibition of the VEGF signaling pathway, and thus provide additional therapeutic benefits. The VEGF antigen-binding site can be selected from any anti-VEGF antibody, including but not limited to, Bevacizumab, Ranibizumab, Brolucizumab, Faricimab, and Vanucizumab, or an antigen-binding fragment thereof.

[00108] In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from Bevacizumab (or an antigen-binding fragment thereof). Bevacizumab (Avastin) is an anti-VEGF human monoclonal antibody. In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an anti-VEGF antibody, or an antigen-binding fragment thereof, disclosed in EP Patent Nos. EP0666868 and EP0817648, or disclosed in PCT Application No. PCT/US1992/009218, all of which are incorporated herein by reference.

[00109] In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from Ranibizumab (or an antigen-binding fragment thereof). Ranibizumab (Lucentis) is a Fab fragment derived from Bevacizumab. In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an anti-VEGF antibody, or an antigen-binding fragment thereof, disclosed in U.S. Patent Application Serial No. 11/840,279, or disclosed in PCT Application No. PCT/EP2007/007276, both of which are incorporated herein by reference.

[00110] In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from Brolucizumab (or an antigen-binding fragment thereof). Brolucizumab (RTH258; Beovu) is a humanized scFv that is an inhibitor of VEGF-A. In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an anti-VEGF antibody, or an antigen-

binding fragment thereof, disclosed in PCT Application No. PCT/US2015/059575, or disclosed in PCT Application No. PCT/US2015/059571, both of which are incorporated herein by reference.

[00111] In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from Faricimab (or an antigen-binding fragment thereof). Faricimab (RG7716) is a bispecific, monoclonal antibody specifically designed for the eye that simultaneously binds to and neutralizes both Angiopoietin-2 (Ang-2) and vascular endothelial growth factor A (VEGF-A). In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an anti-VEGF antibody, or an antigen-binding fragment thereof, disclosed in U.S. Patent No. 10,072,075, or disclosed in PCT Application No. PCT/US2016/053454, both of which are incorporated herein by reference.

[00112] In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from Vanucizumab (or an antigen-binding fragment thereof). Vanucizumab (RG7721) is a humanized bispecific, monoclonal antibody designed for the treatment of cancer composed of two different heavy chains and two different light chains (one arm binds Ang2 and the other binds VEGF (bevacizumab)). In some embodiments, the second anti-VEGF antigen-binding site comprises a VH and a VL that are at least 90% identical to a VH and a VL from an anti-VEGF antibody, or an antigen-binding fragment thereof, disclosed in U.S. Patent No. 8,945,552, or disclosed in PCT Application No. PCT/EP2011/054504, both of which are incorporated herein by reference.

[00113] In other embodiments, a bispecific antibody of the present disclosure includes an anti-CFHR4 antigen binding site or an anti-C3 antigen binding site (or antigen binding fragments thereof), and an anti-VEGF antigen binding site (or an antigen binding fragment thereof) from any VEGF antagonist, including but not limited to, anti-VEGF antibodies (e.g., bevacizumab, sevacizumab, and ranibizumab), anti-VEGFR2 antibodies and related molecules (e.g., ramucirumab, tanibirumab, aflibercept), anti-VEGFR1 antibodies and related molecules (e.g., icrucumab, aflibercept (VEGF Trap-Eye; EYLEA®), and ziv-aflibercept (VEGF Trap; ZALTRAP®)), anti-VEGF arms of VEGF bispecific antibodies (e.g., MP-0250, vanucizumab (VEGF-ANG2)), including anti-VEGF, anti-VEGFR1, and anti-VEGFR2 arms.

Multispecific Antibodies

[00114] The amino acid sequences of the bispecific antibodies of the present disclosure are not limited to the specific amino acid sequences described herein. Indeed, an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody, or antigen-binding fragments thereof, can comprise any heavy chain polypeptide or light chain polypeptide that competes with the various antigen-binding sites of these antibodies. Antibody competition can be assayed using routine peptide competition assays such as, for example, ELISA, Western blot, or immunohistochemistry methods (see, e.g., U.S. Patents 4,828,981 and 8,568,992; and Braitbard et al., *Proteome Sci.*, *4*: 12 (2006)).

[00115] A bispecific antibody of the present disclosure may be a whole antibody, or an antigen-binding fragment of a whole antibody. As defined herein, antigen-binding antibody fragments encompassed by the present disclosure include, but are not limited to, $F(ab')_2$, Fab', Fab, Fv, scFv, dsFv, dAb, and single chain binding polypeptides. Antibody fragments and their therapeutic utility are further described in, e.g., Nelson, A.L., MAbs. 2010 Jan-Feb; 2(1): 77-83; Joosten et al., Microbial Cell Factories volume 2, Article number: 1 (2003); and Bates A, Power CA., Antibodies (Basel). 2019;8(2):28; doi:10.3390/antib8020028). In some embodiments, the anti-CFHR4, the anti-C3, and/or the anti-VEGF antigen-binding fragments are a single-chain variable fragments (scFv), which are engineered antibodies generated by the fusion of the heavy (VH) and light chains (VL) of immunoglobulins through a short polypeptide linker. Single chain variable domain (Fv) fragments (scFv) are used in the art in a variety of clinical and therapeutic applications, primarily due to their improved pharmacokinetic properties as compared to the parent monoclonal antibodies and the relative ease of producing them in large quantities at low cost (Monnier et al., Antibodies 2013, 2(2), 193-208; doi.org/10.3390/antib2020193; Safdari et al., Mol Med. 2016; 22: 258-270; and Lu, R., Hwang, Y., Liu, I. et al. Development of therapeutic antibodies for the treatment of diseases. J Biomed Sci 27, 1 (2020). https://doi.org/10.1186/s12929-019-0592-z).

[00116] The bispecific antibodies of the present disclosure may be a diabody. Diabodies are antibody fragments with two antigen-binding sites that may be bivalent or bispecific. See, for example, EP 404,097; WO 1993/01161; Hudson et al., *Nat. Med.* 9:129-134 (2003); and Hollinger et al., *Proc. Natl. Acad. Sci. USA* 90: 6444-6448 (1993). Triabodies and tetrabodies are also described in Hudson et al., *Nat. Med.* 9:129-134 (2003). An anti-CFHR4, anti-C3, or anti-VEGF antibody of the present disclosure may be a single-domain antibody (also referred to as a nanobody). Single-domain antibodies are antibody fragments comprising all or a portion of the

heavy chain variable domain or all or a portion of the light chain variable domain of an antibody. In certain embodiments, a single-domain antibody is a human single-domain antibody (Domantis, Inc., Waltham, Mass.; see, e.g., U.S. Pat. No. 6,248,516 B1). Antibody fragments can be made by various techniques, including but not limited to proteolytic digestion of an intact antibody as well as production by recombinant host cells (e.g., *E. coli* or phage), as described herein.

[00117] In other embodiments, a bispecific antibody of the present disclosure is a whole antibody. As defined herein, a whole antibody comprises two identical copies of a heavy (H) chain polypeptide and two identical copies of a light (L) chain polypeptide. Each of the heavy chains contains one N-terminal variable (V_H) region and three C-terminal constant (C_{H1}, C_{H2}, and C_{H3}) regions, and each light chain contains one N-terminal variable (V_L) region and one C-terminal constant (C_L). The heavy chain C-terminal constant region contains the fragment crystallizable (Fc) domain, which determines antibody class and is responsible for humoral and cellular effector functions. Antibodies are divided into five major classes (or "isotypes"), IgG, IgM, IgA, IgD and IgE, which differ in their function in the immune system. IgGs are the most abundant immunoglobulins in the blood, representing 60% of total serum antibodies in humans. IgG antibodies may be subclassified as IgG1, IgG2, IgG3, and IgG4, named in order of their abundance in serum (IgG1 being the most abundant) (Vidarsson et al., Frontiers in Immunology. 5: 520 (2014)). A whole bispecific antibody described herein (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody) may be of any suitable class and/or subclass. In some embodiments, the antibody is of class IgG (e.g., IgG1, IgG2, IgG3, or IgG4). For example, the antibody may be an IgG1 antibody.

[00118] As discussed above, the Fc domain mediates several effector functions of antibodies, such as binding to receptors on target cells and complement fixation (triggering effector functions that eliminate the antigen). In some embodiments, the Fc domain may be modified or engineered to alter its effector functions. For example, Fc domains may be modified to improve antibody-dependent cellular cytotoxicity (ADCC) and antibody-dependent cellular phagocytosis (ADCP), and to control serum half-life. In some embodiments, the Fc domain of the anti-CFHR4 antibody may be engineered to modulate affinity for an Fc receptor, such as Fcγ receptors (FcγRs) and the neonatal Fc receptor (FcRn). Indeed, optimization of the interactions between antibodies and FcγRs has emerged as a promising approach for enhancing the activity of therapeutic antibodies for the treatment of various diseases (Mimoto et al., Curr. Pharm. Biotechnol. 17, 1298-1314

(2016); Lazar et al., Proc. Natl Acad. Sci. USA 103, 4005-4010 (2006); Richards et al., Mol. Cancer Ther. 7, 2517-2527 (2008); Nordstrom et al., Breast Cancer Res. 13, R123 (2011); and Kang, T.H., Jung, S.T., Exp Mol Med 51, 1-9 (2019)). The Fc domain also may be modified to improve serum half-life, e.g., by engineering IgG Fc for higher FcRn binding (Zalevsky et al., Nat. Biotechnol. 28, 157-159 (2010); and Dall'Acqua et al., J. Immunol. 169, 5171-5180 (2002)). In other embodiments, the Fc domain may be modified to create monovalency or antibody bispecificity for improving therapeutic potency. For example, an Fc domain may be generated that does not form a homodimer but remains as a soluble monomer, mFc, that exhibits high affinity for FcγRI but no detectable binding to FcγRIIIa. In other embodiments, a heterodimeric Fc domain may be generated to obtain bispecific properties for antigen binding to circumvent homodimer formation. Engineered Fc domains may be generated by inducing point mutations or by modifying glycosylation of the Fc domain (Saunders, K.O., Front Immunol. 2019;10:1296; Kelley, R.F., Meng, Y.G., Liu et al., J Biol Chem. 2014;289:3571-90; Monnet et al., MAbs. 2014;6:422-36; Li et al., Proc Natl Acad Sci U S A. 2017;114:3485-90; and Lin et al., Proc Natl Acad Sci U S A. 2015;112:10611-6; Kang and Jung, *supra*).

[00119] As described above, the bispecific antibodies of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody) can be a monoclonal antibody, a human antibody, a humanized antibody, and/or a chimeric antibody. In some embodiments, the antibody is a fragment selected from the group consisting of Fab, Fab-C, Fab'-SH, Fv, scFv, and $(Fab')_2$ fragments. In some embodiments, the bispecific antibodies of the present disclosure comprise two or more single-domain antibodies that form a bivalent antibody, a trivalent antibody, or a tetravalent antibody that recognizes different epitopes on the same or different antigens.

[00120] In some embodiments, the bispecific antibodies of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody) are chimeric antibodies. Certain chimeric antibodies are described, for example, in U.S. Pat. No. 4,816,567; and Morrison et al., *Proc. Natl. Acad. Sci. USA*. 81:6851-6855 (1984). In one example, a chimeric antibody comprises a non-human variable region (e.g., a variable domain derived from a mouse, rat, hamster, rabbit, or non-human primate, such as a monkey) and a human constant domain. In a further example, a chimeric antibody is a

"class switched" antibody in which the class or subclass has been changed from that of the parent antibody. Chimeric antibodies include antigen-binding fragments thereof.

[00121] In certain embodiments, a chimeric antibody is a humanized antibody. Typically, a non-human antibody is humanized to reduce immunogenicity to humans, while retaining the specificity and affinity of the parental non-human antibody. Generally, a humanized antibody comprises one or more variable domains in which HVRs, for example, CDRs, (or portions thereof) are derived from a non-human antibody, and FRs (or portions thereof) are derived from human antibody sequences. A humanized antibody optionally will also comprise at least a portion of a human constant region. In some embodiments, some FR residues in a humanized antibody are substituted with corresponding residues from a non-human antibody (e.g., the antibody from which the HVR residues are derived), e.g., to restore or improve antibody specificity or affinity.

[00122] Humanized antibodies and methods of making them are reviewed, for example, in Almagro and Fransson, *Front. Biosci.* 13:1619-1633 (2008), and are further described, for example, in Riechmann et al., *Nature* 332:323-329 (1988); Queen et al., *Proc. Nat'l Acad. Sci. USA* 86:10029-10033 (1989); U.S. Pat. Nos. 5,821,337, 7,527,791, 6,982,321, and 7,087,409; Kashmiri et al., *Methods* 36:25-34 (2005) (describing specificity determining region (SDR) grafting); Padlan, *Mol. Immunol.* 28:489-498 (1991) (describing "resurfacing"); Dall'Acqua et al., *Methods* 36:43-60 (2005) (describing "FR shuffling"); and Osbourn et al., *Methods* 36:61-68 (2005) and Klimka et al., *Br. J. Cancer*, 83:252-260 (2000) (describing the "guided selection" approach to FR shuffling).

[00123] In accordance with the above embodiments, the bispecific antibodies of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody) can be made into bivalent, trivalent, or tetravalent formats. For example, a bispecific antibody of the present disclosure can be a bivalent, bispecific antibody with heteromeric heavy chains (e.g., Triomab, knobs-into-holes (KIH), Duobody, etc). A bispecific antibody of the present disclosure can be a tetravalent multispecific antibody comprised of IgGs with other binding domains fused to either the N- or C-termini of either the heavy or light chains (e.g., dual variable domain [DVD], IgG-scFv fusion, Mabtyrin (IgG with non-antibody binding scaffold "centyrin" fused to C-terminal end of heavy chains). A bispecific antibody of the present disclosure can be comprised of IgGs to which additional antigen combining sites have been added within the structure (e.g., two-in-one antibodies, MAT "Modular

Antibody Technology" platform from F-Star). A bispecific antibody of the present disclosure can be an engineered antibody fragment linked by short peptide linkers which can be made into bivalent, trivalent, or tetravalent formats addressing two to three targets (e.g., bispecific T-cell engager (BiTE), Nanobody platform, dual-affinity re-targeting (DART) antibodies, "tandem antibody" structures (TandAbs)). And a bispecific antibody of the present disclosure can be comprised of chemically coupled IgGs.

Polypeptides and Expression Vectors

[00124] Embodiments of the present disclosure also include a polynucleotide encoding any of the bispecific antibodies of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody). In accordance with these embodiments, the present disclosure includes an expression vector comprising any of the polynucleotides encoding a bispecific antibody of the present disclosure. In some embodiments, the expression vector is suitable for manufacturing a bispecific antibody of the present disclosure for delivery of the antibody to a subject. In certain embodiments, the nucleic acid sequence is in the form of a vector. The vector can be, for example, a plasmid, episome, cosmid, viral vector (e.g., retroviral or adenoviral), or phage. Suitable vectors and methods of vector preparation are well known in the art (see, e.g., Sambrook et al., *Molecular Cloning, a Laboratory Manual*, 4th edition, Cold Spring Harbor Press, Cold Spring Harbor, N.Y. (2012), and Ausubel et al., *Current Protocols in Molecular Biology*, Greene Publishing Associates and John Wiley & Sons, New York, N.Y. (1994)).

[00125] In addition to the nucleic acid encoding an anti-CFHR4 antibody or antigen-binding fragment thereof, the vector desirably comprises expression control sequences, such as promoters, enhancers, polyadenylation signals, transcription terminators, internal ribosome entry sites (IRES), and the like, that provide for the expression of the antibody-encoding nucleic sequence in a host cell. Exemplary expression control sequences are known in the art and described in, for example, Goeddel, *Gene Expression Technology: Methods in Enzymology*, Vol. 185, Academic Press, San Diego, Calif. (1990).

[00126] A vector comprising a nucleic acid sequence encoding a bispecific antibody of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody), or an antigen-binding fragment thereof, may be introduced into a host cell that is capable of expressing the polypeptides

encoded thereby, including any suitable prokaryotic or eukaryotic cell. Examples of suitable prokaryotic cells include, but are not limited to, cells from the genera *Bacillus* (such as *Bacillus subtilis* and *Bacillus brevis*), *Escherichia* (such as *E. coli*), *Pseudomonas*, *Streptomyces*, *Salmonella*, and *Erwinia*. Particularly useful prokaryotic cells include the various strains of *Escherichia coli* (e.g., K12, HB101 (ATCC No. 33694), DH5α, DH10, MC1061 (ATCC No. 53338), and CC102). Suitable eukaryotic cells are known in the art and include, for example, yeast cells, insect cells, and mammalian cells. Examples of suitable yeast cells include those from the genera *Hansenula*, *Kluyveromyces*, *Pichia*, *Rhinosporidium*, *Saccharomyces*, and *Schizosaccharomyces*. Suitable insect cells include Sf-9 and HIS cells (Invitrogen, Carlsbad, Calif.) and are described in, for example, Kitts et al., *Biotechniques*, *14*: 810-817 (1993); Lucklow, *Curr. Opin. Biotechnol.*, *4*: 564-572 (1993); and Lucklow et al., *J. Virol.*, *67*: 4566-4579 (1993). Examples of suitable mammalian cells include, but are not limited to, Chinese hamster ovary cells (CHO) (ATCC No. CCL61), CHO DHFR-cells (Urlaub et al., *Proc. Natl. Acad. Sci. USA*, *97*: 4216-4220 (1980)), human embryonic kidney (HEK) 293 or 293T cells (ATCC No. CRL1573), and 3T3 cells (ATCC No. CCL92). Other suitable mammalian cell lines are the monkey COS-1 (ATCC No. CRL1650) and COS-7 cell lines (ATCC No. CRL1651), as well as the CV-1 cell line (ATCC No. CCL70). Further exemplary mammalian host cells include primate cell lines and rodent cell lines, including transformed cell lines. Normal diploid cells, cell strains derived from *in vitro* culture of primary tissue, as well as primary explants also are suitable. Other suitable mammalian cell lines include, but are not limited to, mouse neuroblastoma N2A cells, HeLa, mouse L-929 cells, and BHK or HaK hamster cell lines, all of which are available from the ATCC. Methods for selecting suitable mammalian host cells and methods for transformation, culture, amplification, screening, and purification of such cells are well known in the art (see, e.g., Ausubel et al., eds., *Short Protocols in Molecular Biology*, 5th ed., John Wiley & Sons, Inc., Hoboken, N.J. (2002)). Preferably, the mammalian cell is a human cell.

[00127] In some embodiments, the vector can include means for attaching a detection moiety to a bispecific antibody of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody). In some embodiments, the vector can include means for attaching a purification moiety to a bispecific antibody of the present disclosure. Exemplary detection and/or purification moieties/tags that can be coupled to a bispecific antibody of the present disclosure includes, but is

not limited to, hemagglutinin (HA), c-Myc, V5, DYKDDDDK, His tag (e.g., 6x-HIS), Glutathione S-Transferase (GST), Maltose Binding Protein (MBP), a fluorophore (e.g., Green Fluorescent Protein (GFP), Red Fluorescent Protein (RFP), mCherry, a chromophore, and/or a luminescent peptide (e.g., luciferase).

[00128] In some embodiments, the expression vector is suitable for use in gene therapy (e.g., an expression vector for delivering a polynucleotide encoding a bispecific antibody of the present disclosure to a subject). In some embodiments, the expression vector is a herpes simplex virus (HSV) vector, or a retrovirus vector. In some embodiments, the expression vector is an adeno-associated virus (AAV) vector, or comprises an AAV backbone. For example, AAV vectors have been designed, produced and used to mediate gene delivery in human subjects, including for therapeutic purposes. Typically, AAV vectors for use in gene transfer comprise a replication defective AAV genome lacking functional Rep and Cap coding viral sequences. Such replication defective AAV vectors more preferably lack most or all of the Rep and Cap coding sequences, and essentially retain one or two AAV ITR sequences and a packaging sequence. The defective genome is packaged in a viral particle, to form a defective, recombined AAV virus, also termed "AAV vector". Methods of producing such AAV vectors have been disclosed in the literature, including using packaging cells, auxiliary viruses or plasmids, and/or baculovirus systems (Samulski et al., (1989) J. Virology 63, 3822; Xiao et al., (1998) J. Virology 72, 2224; Inoue et al., (1998) J. Virol. 72, 7024; WO98/22607; W02005/072364). Methods of producing pseudotyped AAV vectors have also been reported (e.g., WO00/28004), as well as various modifications or formulations of AAV vectors, to reduce their immunogenicity upon in vivo administration (see e.g., W001/23001; WOOO/73316; WO04/112727; W005/005610; WO99/06562). AAV vectors may be prepared or derived from various serotypes of AAVs, which may be even mixed together or with other types of viruses to produce chimeric (e.g., pseudotyped) AAV viruses. Examples of tAAVs are human AAV4 vectors, human AAV7 vectors, human AAV9 vectors, human AAV10 vectors, or bovine AAV vectors. The AAV vector may be derived from a single AAV serotype or comprise sequences or components originating from at least two distinct AAV serotypes (pseudotyped AAV vector), e.g., an AAV vector comprising an AAV genome derived from one AAV serotype (for example AAV9), and a capsid derived at least in part from a distinct AAV serotype. An AAV vector, as used herein, is a vector which comprises at least one component part derivable from an adeno-associated virus. Preferably, that component part is

involved in the biological mechanisms by which the vector infects or transduces target cells and expresses an anti-CFHR4 antibody of the present disclosure (e.g., ocular delivery/expression).

[00129] In other embodiments, the expression vector is a lentiviral vector (LV), or comprises an LV backbone. Lentiviruses are part of a larger group of retroviruses. A detailed list of lentiviruses may be found in Coffin et al (1997) "Retroviruses" Cold Spring Harbour Laboratory Press Eds: JM Coffin, SM Hughes, HE Varmus pp 758-763). For example, lentiviruses can be divided into primate and non-primate groups. Examples of primate lentiviruses include but are not limited to the human immunodeficiency virus (HIV), the causative agent of human auto immunodeficiency syndrome (AIDS), and the simian immunodeficiency virus (SIV). The non-primate lentiviral group includes the prototype "slow virus" visna/maedi virus (VMV), as well as the related caprine arthritis-encephalitis virus (CAEV), equine infectious anaemia virus (EIAV), feline immunodeficiency virus (FIV), Maedi visna virus (MVV) and bovine immunodeficiency virus (BIV). In one embodiment, the lentiviral vector is derived from HIV- 1, HIV-2, SIV, FIV, BIV, EIAV, CAEV or Visna lentivirus. The lentivirus family differs from retroviruses in that lentiviruses have the capability to infect both dividing and non-dividing cells (Lewis et al (1992) EM BO J 11 (8): 3053-3058 and Lewis and Emerman (1994) J Virol 68 (1):510-516). In contrast, other retroviruses, such as MLV, are unable to infect non-dividing or slowly dividing cells such as those that make up, for example, muscle, brain, lung and liver tissue. A lentiviral vector, as used herein, is a vector which comprises at least one component part derivable from a lentivirus. Preferably, that component part is involved in the biological mechanisms by which the vector infects or transduces target cells and expresses an anti-CFHR4 antibody of the present disclosure (e.g., ocular delivery/expression).

[00130] Additional compositions and method for ocular gene therapy can be found in, e.g., Bordet, T., and Behar-Cohen, F., "Ocular gene therapies in clinical practice: viral vectors and nonviral alternatives," Drug Discovery Today, Volume 24, Issue 8, August 2019, Pages 1685-1693). In some embodiments, gene therapy platforms, methods, and compositions that can be used to deliver a bispecific antibody of the present disclosure to a subject (e.g., ocular delivery) includes the platforms, methods, and compositions disclosed in US20220025396, US20220011308, US20210371877, US20210363192, US20190078099, US20190038724, and US10494646B2, which are incorporated herein by reference. In other embodiments, gene therapy platforms, methods, and compositions that can be used to deliver a bispecific antibody of the present

disclosure to a subject (e.g., ocular delivery) includes the platforms, methods, and compositions based on HMR59 (Hemera Biosciences), which through its protein product soluble CD59, blocks the membrane attack complex that forms during the terminal step in the complement cascade. HMR59 is designed to be administered as a single intraocular injection.

[00131] In accordance with these embodiments, the present disclosure also provides a method of administering ocular gene therapy to a subject in need thereof comprising injecting a pharmaceutical composition comprising an effective amount of an expression vector described herein (e.g., an expression vector comprising a polynucleotides encoding a bispecific antibody of the present disclosure). As described further below, the present disclosure also provides a method of treating AMD (wet and/or dry AMD) and/or GA comprising administering a pharmaceutical composition comprising an effective amount of an expression vector described herein (e.g., an expression vector comprising a polynucleotides encoding a bispecific antibody of the present disclosure). In some embodiments, administering the pharmaceutical composition treats at least one AMD symptom (wet and/or dry AMD symptom) and/or at least one GA symptom.

Methods of Making Bispecific Antibodies

[00132] In general, there are more than 100 different bispecific antibody formats that have been produced due to the modular architecture of antibodies. These formats vary in many ways, including based on their molecular weight, the number of antigen-binding sites, the spatial relationship between different binding sites, the valency for each antigen, the ability to support secondary immune functions, and the pharmacokinetic half-life. Recombinant bispecific antibodies can be divided into two classes: bispecific formats with Fc regions, and bispecific formats without Fc regions. Bispecific antibodies with an Fc region retain Fc-mediated effector functions, such as CDC and ADCC. These formats roughly include "knob into hole" IgG, crossMab, ortho-Fab IgG, DVD-Ig, two in one IgG, IgG-scFv and scFv2-Fc.

[00133] Bispecific antibodies with no Fc lack Fc-mediated effector functions. However, the smaller size of such antibodies offers a better tumor tissue penetration over IgG-like formats. In this format, the variable domains of each parental monoclonal antibody and the linkers are cloned and linked to form a single-chain bispecific antibody. These bispecific antibodies represent many formats, including tandem scFvs, diabody format, single-chain diabodies, tandem diabodies (TandAbs), dual-affinity retargeting molecules (DARTs), dock-and-lock (DNL), and nanobodies.

[00134] A number of strategies have been developed to generate bispecific antibodies. Hybrid hybridoma (also referred to as quadroma) was the earliest technology used to produce bispecific antibodies. It's based on the somatic fusion of two different hybridoma cell lines expressing murine IgGs of desired specificities. However, the real percentage of functional bispecific antibody by a quadroma cell line is unpredictable and a laborious process is required to isolate the bispecific antibody from the side products. By using molecular cloning technology, bispecific IgG antibodies can be assembled from two different heavy and light chains expressed in the same producer cell. The production of bispecific antibodies requires at least two plasmids for heterodimerized heavy chains and one plasmid for a common light chain or two light-chain plasmids if two different light chains are used. Notably, expressing HC and LC on separate plasmids can be advantageous because the manipulation of the plasmid ratio is an easy and efficient approach to optimize protein assembly for desired products. Subsequently, a laborious and time-consuming process is typically needed to select the most desirable clonal cell lines from a heterogeneous stable transfectant pool for large-scale antibody production. Generally, methods of making bispecific antibodies that can be divided into three groups: chemical recombination, cell fusion, and genetic manipulation (Reichert, J.M, and Dhimolea, E., Drug Discov Today, 2012 Sep;17(17-18):954-63). Recent reviews on the different strategies in constructing bispecific antibodies, with therapeutic application emphasis, include Wu, C., Drug News Perspect. 2009 Oct;22(8):453-8; Gu, J., and Ghayur, T., Methods Enzymol. 2012; 502:25-41; and Kontermann, R., MAbs, Mar-Apr 2012; 4(2): 182-97.

[00135] The bispecific antibodies of the present disclosure can be made using any method known in the art. One approach for single cell manufacturing of bispecific antibodies is to use antibodies that are based on the same light chain in combination with a minimal set of Fc mutations to drive heavy chain heterodimerization. The resulting bispecific antibodies can readily be purified from the two undesired byproducts. As used herein the term "common light chain" refers to an immunoglobulin light chain comprising a variable domain that can productively associate with multiple heavy chain variable domains to form a paratope with each heavy chain variable region that is capable of specifically binding the epitope bound by the antibody in which the heavy chain variable region was originally encountered. Various antibody heavy or light chains, or portions thereof, are referred to herein as being "related" to the corresponding chain or portion thereof of an enumerated or specifically identified antibody. This denotes that the chain or portion

thereof has identical sequence to the corresponding chain or portion thereof of an enumerated or specifically identified antibody, save for specifically indicated modifications, such as amino acid substitutions, of which there may be none. As described further herein, the bispecific antibodies of the present disclosure can be generated using this "common light chain" approach, including using one or more light chains of an anti-CHFR4 antibody

Compositions and Methods of Treatment

[00136] The bispecific antibodies of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody) can be administered as part of a pharmaceutical composition in a therapeutically effective amount to treat an eye disease (e.g., AMD or GA). In some embodiments, the composition is suitable for ocular administration. In some embodiments, ocular administration comprises injection into vitreous fluid. In some embodiments, ocular administration comprises delivering the antibody using a conjunctival insert, a contact lens, a gel, a nanoparticle, a mucoadhesive polymer, an ointment, a solution, a suspension, eye drops, and/or an implant (e.g., Susvimo™). Recent methods and formulations for ocular administration can be found in, e.g., Souto, E.B., et al. "Advanced Formulation Approaches for Ocular Drug Delivery: State-Of-The-Art and Recent Patents," Pharmaceutics, 2019 Sep; 11(9): 460).

[00137] In accordance with these embodiments, the methods include administering a pharmaceutical composition comprising a therapeutically effective amount of a bispecific antibody of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody). In some embodiments, the pharmaceutical composition is administered ocularly and treats at least one AMD symptom. In some embodiments, AMD comprises wet AMD. In some embodiments, AMD comprises dry AMD (e.g., GA). In some embodiments, the at least one AMD symptom comprises visual distortion, reduced central vision, blurred vision, and/or difficulty adapting to low light. In some embodiments, administering the pharmaceutical composition reduces complement activation in the subject's eye.

[00138] As used herein, the terms "treatment," "treating," and the like refer to obtaining a desired pharmacologic and/or physiologic effect. In some embodiments, the effect is therapeutic, i.e., the effect partially or completely cures a disease and/or adverse symptom attributable to the disease. To this end, the methods of the present disclosure comprise administering a

"therapeutically effective amount" of a bispecific antibody, or composition comprising a bispecific antibody. A "therapeutically effective amount" refers to an amount effective, at dosages and for periods of time necessary, to achieve a desired therapeutic result. The therapeutically effective amount may vary according to factors such as the disease state, age, sex, and weight of the individual, and the ability of the monoclonal antibody to elicit a desired response in the individual. For example, a therapeutically effective amount of a bispecific antibody of the present disclosure is an amount which treats at least one AMD and/or GA symptom in a subject. In some embodiments, the pharmacologic and/or physiologic effect may be prophylactic, i.e., the effect completely or partially prevents a disease or symptom thereof. In this respect, the methods of the present disclosure comprise administering a "prophylactically effective amount" of a bispecific antibody or composition comprising a bispecific antibody. A "prophylactically effective amount" refers to an amount effective, at dosages and for periods of time necessary, to achieve a desired prophylactic result (e.g., prevention of AMD and/or GA onset).

[00139] A typical dose of a therapeutically effective amount of a bispecific antibody of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody) can range from, for example, about 0.0001 mg/dose to about 100 mg/dose for each eye to be treated. In some embodiments, a therapeutically effective amount of a bispecific antibody of the present disclosure can range from about 0.001 mg/dose to about 100 mg/dose, from about 0.01 mg/dose to about 100 mg/dose, from about 0.05 mg/dose to about 50 mg/dose, from about 0.1 mg/dose to about 10 mg/dose, from about 0.5 mg/dose to about 5 mg/dose, and from about 1 mg/dose to about 10 mg/dose. In some embodiments, a therapeutically effective concentration of a bispecific antibody of the present disclosure can range from, for example, about 0.0001 mg to about 100 mg of the antibody per milliliter of solution. In some embodiments, a therapeutically effective concentration of a bispecific antibody of the present disclosure can range from about 0.001 mg/ml to about 100 mg/ml, from about 0.01 mg/ml to about 100 mg/ml, from about 0.1 mg/ml to about 100 mg/ml, from about 1.0 mg/ml and about 100 mg/ml, from about 0.001 mg/ml and about 50 mg/ml, from about 0.01 mg/ml and about 50 mg/ml, from about 0.1 mg/ml and about 50 mg/ml, from about 0.1 mg/ml and about 25 mg/ml, from about 0.1 mg/ml and about 10 mg/ml, and from about 1.0 mg/ml and about 10 mg/ml. In some embodiments, a therapeutically effective dose of a bispecific antibody of the present disclosure can be, exactly or approximately, 0.1 mg, 0.2 mg, 0.25 mg, 0.3

mg, 0.35 mg, 0.4 mg, 0.45 mg, 0.5 mg, 0.55 mg, 0.6 mg, 0.65 mg, 0.7 mg, 0.75 mg, 0.8 mg, 0.85 mg, 0.9 mg, 0.95 mg, 1.0 mg, 2.0 mg, 3.0 mg, 4.0 mg, 5.0 mg, 10.0 mg, 15.0 mg, 20.0 mg, or 25.0 mg, or can fall within a range delimited by any two of the foregoing values. For example, in certain embodiments, a sustained release formulation, (e.g., an ocular implant) can be, exactly or approximately, 0.1 mg, 0.2 mg, 0.25 mg, 0.3 mg, 0.35 mg, 0.4 mg, 0.45 mg, 0.5 mg, 0.55 mg, 0.6 mg, 0.65 mg, 0.7 mg, 0.75 mg, 0.8 mg, 0.85 mg, 0.9 mg, 0.95 mg, 1.0 mg, 2.0 mg, 3.0 mg, 4.0 mg, 5.0 mg, 10.0 mg, 15.0 mg, 20.0 mg, or 25.0 mg of a bispecific antibody, or an amount that falls within a range delimited by any two of the foregoing values.

[00140] Therapeutic or prophylactic efficacy can be monitored by periodic assessment of treated patients. For repeated administrations over several days or longer, depending on the condition, the treatment is repeated until a desired suppression of disease symptoms occurs. However, other dosage regimens may be useful and are within the scope of the present disclosure. The desired dosage can be delivered by a single bolus administration of the composition, by multiple bolus administrations of the composition, or by continuous infusion administration of the composition. The composition comprising a bispecific antibody, or antigen-binding fragment thereof, can be administered to a mammal using standard administration techniques, including ocular, oral, intravenous, intraperitoneal, subcutaneous, pulmonary, transdermal, intramuscular, intranasal, buccal, sublingual, or suppository administration. The composition preferably is suitable for ocular administration.

[00141] In accordance with the compositions and methods of treatment described herein, embodiments of the present disclosure include bispecific antibodies that have enhanced half-life (e.g., after ocular administration), such that the bispecific antibody can be administered less often to a subject. In some embodiments, the antibody comprises a half-life extension moiety. In some embodiments, the half-life extension moiety comprises a polypeptide that can be coupled to a bispecific antibody of the present disclosure by any means known in the art (e.g., generation of a fusion protein). In some embodiments, the polypeptide that can be coupled to a bispecific antibody of the present disclosure is at least 20 amino acids in length and comprises any combination of G, A, S T, E, and P residues. In some embodiments, the half-life extension polypeptide is attached to the C-terminus or N-terminus of the antibody. In some embodiments, this is referred to as "XTENylation," as described further in US8933197, US7846445, US7855279, US8492530,

US9938331, US8673860, US9371369, US9926351, US10961287, US10172953, and US10953073.

[00142] The present disclosure also provides a composition comprising any of the bispecific antibodies or antigen-binding fragments thereof described herein (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody). The composition desirably is a pharmaceutically acceptable (e.g., physiologically acceptable) composition, which comprises a carrier, preferably a pharmaceutically acceptable (e.g., physiologically acceptable) carrier, and the bispecific antibody or antigen-binding fragment thereof. Any suitable carrier can be used within the context of the present disclosure, and such carriers are well known in the art. For example, the composition may contain preservatives, such as, for example, methylparaben, propylparaben, sodium benzoate, and benzalkonium chloride. A mixture of two or more preservatives optionally may be used. In addition, buffering agents may be included in the composition. Suitable buffering agents include, for example, citric acid, sodium citrate, phosphoric acid, potassium phosphate, and various other acids and salts. A mixture of two or more buffering agents optionally may be used. Methods for preparing compositions for pharmaceutical use are known to those skilled in the art and are described in, for example, *Remington: The Science and Practice of Pharmacy*, Lippincott Williams & Wilkins; 21st ed. (May 1, 2005).

[00143] Once administered to a mammal (e.g., a human), the biological activity of the bispecific antibody, or antigen-binding fragment thereof, can be measured by any suitable method known in the art. For example, the biological activity can be assessed by determining the stability of the bispecific antibody. The biological activity of the bispecific antibody also can be assessed by determining its binding affinity to antigen-containing peptides and/or by assessing its binding affinity to peptides with which it may cross-react. The term "affinity" refers to the equilibrium constant for the reversible binding of two agents and is expressed as the dissociation constant (K_D). Affinity of a binding agent to a ligand, such as affinity of an antibody for an epitope, can be, for example, from about 1 femtomolar (fM) to about 1 millimolar (mM) (e.g., from about 1 picomolar (pM) to about 1 nanomolar (nM), or from about 1 nM to about 1 micromolar (μM)). In some embodiments, the affinity of an anti-CFHR4 antibody may be from about 1 nm to about 20 nm, and desirably from about 5 nm to about 10 nm. Antibody affinity for an antigen or epitope of interest can be measured using any art-recognized assay. Such methods include, for example,

fluorescence activated cell sorting (FACS), separable beads (e.g., magnetic beads), antigen panning, and/or ELISA (see, e.g., Janeway et al. (eds.), Immunobiology, 5th ed., Garland Publishing, New York, N.Y., 2001).

[00144] In some embodiments, a bispecific antibody, or composition comprising a bispecific antibody, may be administered alone or in combination with other drugs. For example, the bispecific antibodies of the present disclosure (e.g., an anti-CFHR4/anti-C3 bispecific antibody, an anti-CFHR4/anti-VEGF bispecific antibody, and an anti-C3/anti-VEGF bispecific antibody) can be administered in combination with other agents for the treatment or prevention of AMD and/or GA, as disclosed herein. For example, bispecific antibodies of the present disclosure, or antibody conjugates, fusion proteins, or polymeric formulations thereof, can be used either alone or in combination with other agents in a therapy. For instance, a bispecific antibody may be co-administered with at least one additional therapeutic agent. In certain embodiments, an additional therapeutic agent is another antibody, a chemotherapeutic agent, a cytotoxic agent, an anti-angiogenic agent, an immunosuppressive agent, a prodrug, a cytokine, a cytokine antagonist, cytotoxic radiotherapy, a corticosteroid, an anti-emetic, a cancer vaccine, an analgesic, a growth-inhibitory agent, or combinations thereof.

[00145] For example, in certain embodiments, any of the preceding methods further comprises administering one or more additional compounds. In certain embodiments, the bispecific antibody, antibody conjugate, fusion protein, or polymeric formulation is administered simultaneously with the additional compound(s). In certain embodiments, the bispecific antibody, antibody conjugate, fusion protein, or polymeric formulation is administered before or after the additional compound(s). In certain embodiments, the additional compound binds to a second biological molecule selected from the group consisting of VEGF, IL-1β; IL-6; IL-6R; IL-13; IL-13R; PDGF; angiopoietin; Ang2; Tie2; S1P; integrins αvβ3, αvβ5, and α5β1; betacellulin; apelin/APJ; erythropoietin; complement factor D; TNFα; HtrA1; a VEGF receptor; ST-2 receptor; and proteins genetically linked to AMD risk, such as complement pathway components C2, factor B, factor H, CFHR3, C3b, C5, C5a, and C3a; HtrA1; ARMS2; TIMP3; HLA; interleukin-8 (IL-8); CX3CR1; TLR3; TLR4; CETP; LIPC; COL10A1; and TNFRSF10A. In some embodiments, the additional compound is an antibody or antigen-binding fragment thereof. In some embodiments according to (or as applied to) any of the embodiments above, the ocular disorder is an intraocular neovascular disease selected from the group consisting of proliferative retinopathies, choroidal

neovascularization (CNV), age-related macular degeneration (AMD), geographic atrophy (GA), diabetic and other ischemia-related retinopathies, diabetic macular edema, pathological myopia, von Hippel-Lindau disease, histoplasmosis of the eye, retinal vein occlusion (RVO), including CRVO and BRVO, corneal neovascularization, retinal neovascularization, and retinopathy of prematurity (ROP).

[00146] In some instances, a bispecific antibody of the present disclosure, or an antibody conjugate, fusion protein, and/or polymeric formulation thereof, may be administered in combination with at least one additional therapeutic agent for treatment of an ocular disorder, for example, an ocular disorder described herein (e.g., AMD (e.g., wet AMD or dry AMD), GA, DME, DR, or RVO). Exemplary additional therapeutic agents for combination therapy for treatment of ocular disorders include, without limitation, anti-angiogenic agents, such as VEGF antagonists, including, for example, anti-VEGF antibodies (e.g., the anti-VEGF Fab LUCENTIS® (ranibizumab)), soluble receptor fusion proteins (e.g., the recombinant soluble receptor fusion protein EYLEA® (aflibercept, also known as VEGF Trap Eye; Regeneron/Aventis)), aptamers (e.g., the anti-VEGF pegylated aptamer MACUGEN® (pegaptanib sodium; NeXstar Pharmaceuticals/OSI Pharmaceuticals)), and VEGFR tyrosine kinase inhibitors (e.g., 4-(4-bromo-2-fluoroanilino)-6-methoxy-7-(1-methylpiperidin-4-ylmethoxy)quinazoline (ZD6474), 4-(4-fluoro-2-methylindol-5-yloxy)-6-methoxy-7-(3-pyrrolidin-1-ylpropoxy)quinazoline (AZD2171), vatalanib (PTK787), semaxaminib (SU5416; SUGEN), and SUTENT® (sunitinib)); Tryptophanyl-tRNA synthetase (TrpRS); squalamine; RETAANE® (anecortave acetate for depot suspension; Alcon, Inc.); Combretastatin A4 Prodrug (CA4P); MIFEPREX® (mifepristone-ru486); subtenon triamcinolone acetonide; intravitreal crystalline triamcinolone acetonide; matrix metalloproteinase inhibitors (e.g., Prinomastat (AG3340; Pfizer)); fluocinolone acetonide (including fluocinolone intraocular implant; Bausch & Lomb/Control Delivery Systems); linomide; inhibitors of integrin β3 function; angiostatin, and combinations thereof.

[00147] Further examples of additional therapeutic agents that can be used in combination with a bispecific antibody of the present disclosure, or an antibody conjugate, fusion protein, and/or polymeric formulation thereof, for treatment of an ocular disorder (e.g., AMD, GA, DME, DR, or RVO), include, but are not limited to, VISUDYNE® (verteporfin; a light-activated drug that is typically used in conjunction with photodynamic therapy with a non-thermal laser), PKC412, Endovion (NS 3728; NeuroSearch A/S), neurotrophic factors (e.g., glial derived neurotrophic

factor (GDNF) and ciliary neurotrophic factor (CNTF)), diltiazem, dorzolamide, PHOTOTROP®, 9-cis-retinal, eye medication (e.g., phospholine iodide, echothiophate, or carbonic anhydrase inhibitors), veovastat (AE-941; AEterna Laboratories, Inc.), Sirna-027 (AGF-745; Sirna Therapeutics, Inc.), neurotrophins (including, by way of example only, NT-4/5, Genentech), Cand5 (Acuity Pharmaceuticals), INS-37217 (Inspire Pharmaceuticals), integrin antagonists (including those from Jerini AG and Abbott Laboratories), EG-3306 (Ark Therapeutics Ltd.), BDM-E (BioDiem Ltd.), thalidomide (as used, for example, by EntreMed, Inc.), cardiotrophin-1 (Genentech), 2-methoxyestradiol (Allergan/Oculex), DL-8234 (Toray Industries), NTC-200 (Neurotech), tetrathiomolybdate (University of Michigan), LYN-002 (Lynkeus Biotech), microalgal compound (Aquasearch/Albany, Mera Pharmaceuticals), D-9120 (Celitech Group plc), ATX-S10 (Hamamatsu Photonics), TGF-beta 2 (Genzyme/Celtrix), tyrosine kinase inhibitors (e.g., those from Allergan, SUGEN, or Pfizer), NX-278-L (NeXstar Pharmaceuticals/Gilead Sciences), Opt-24 (OPTIS France SA), retinal cell ganglion neuroprotectants (Cogent Neurosciences), N-nitropyrazole derivatives (Texas A&M University System), KP-102 (Krenitsky Pharmaceuticals), cyclosporin A, therapeutic agents used in photodynamic therapy (e.g., VISUDYNE®; receptor-targeted PDT, Bristol-Myers Squibb, Co.; porfimer sodium for injection with PDT; verteporfin, QLT Inc.; rostaporfin with PDT, Miravent Medical Technologies; talaporfin sodium with PDT, Nippon Petroleum; and motexafin lutetium, Pharmacyclics, Inc.), antisense oligonucleotides (including, by way of example, products tested by Novagali Pharma SA and ISIS-13650, Isis Pharmaceuticals), and combinations thereof.

[00148] A bispecific antibody of the present disclosure, or an antibody conjugate, fusion protein, and/or polymeric formulation thereof, may be administered in combination with a therapy or surgical procedure for treatment of an ocular disorder (e.g., AMD, GA DME, DR, or RVO), including, for example, laser photocoagulation (e.g., panretinal photocoagulation (PRP)), drusen lasering, macular hole surgery, macular translocation surgery, implantable miniature telescopes, PHI-motion angiography (also known as micro-laser therapy and feeder vessel treatment), proton beam therapy, microstimulation therapy, retinal detachment and vitreous surgery, scleral buckle, submacular surgery, transpupillary thermotherapy, photosystem I therapy, use of RNA interference (RNAi), extracorporeal rheopheresis (also known as membrane differential filtration and rheotherapy), microchip implantation, stem cell therapy, gene replacement therapy, ribozyme gene therapy (including gene therapy for hypoxia response element, Oxford Biomedica; Lentipak,

Genetix; and PDEF gene therapy, GenVec), photoreceptor/retinal cells transplantation (including transplantable retinal epithelial cells, Diacrin, Inc.; retinal cell transplant, Cell Genesys, Inc.), acupuncture, and combinations thereof.

[00149] In some embodiments, a bispecific antibody of the present disclosure, or an antibody conjugate, fusion protein, and/or polymeric formulation thereof, can be administered in combination with an anti-angiogenic agent for treatment of an ocular disorder (e.g., AMD, GA, DME, DR, or RVO). Any suitable anti-angiogenic agent can be used in combination with an antibody of the present disclosure, including, but not limited to, those listed by Carmeliet et al. *Nature* 407:249-257, 2000. In some embodiments, the anti-angiogenic agent is a VEGF antagonist, including, but not limited to, an anti-VEGF antibody (e.g., the anti-VEGF Fab LUCENTIS® (ranibizumab), RTH-258 (formerly ESBA-1008, an anti-VEGF single-chain antibody fragment; Novartis), or a bispecific anti-VEGF antibody (e.g., an anti-VEGF/anti-angiopoeitin 2 bispecific antibody such as RG-7716; Roche)), a soluble recombinant receptor fusion protein (e.g., EYLEA® (aflibercept)), a VEGF variant, a soluble VEGFR fragment, an aptamer capable of blocking VEGF (e.g., pegaptanib) or VEGFR, a neutralizing anti-VEGFR antibody, a small molecule inhibitor of VEGFR tyrosine kinases, an anti-VEGF DARPin® (e.g., abicipar pegol), a small interfering RNAs which inhibits expression of VEGF or VEGFR, a VEGFR tyrosine kinase inhibitor (e.g., 4-(4-bromo-2-fluoroanilino)-6-methoxy-7-(1-methylpiperidin-4-ylmethoxy)quinazoline (ZD6474), 4-(4-fluoro-2-methylindol-5-yloxy)-6-methoxy-7-(3-pyrrolidin-1-ylpropoxy)quinazoline (AZD2171), vatalanib (PTK787), semaxaminib (SU5416; SUGEN), and SUTENT® (sunitinib)), and combinations thereof.

[00150] Other suitable anti-angiogenic agents that may be administered in combination with a bispecific antibody of the present disclosure, or an antibody conjugate, fusion protein, and/or polymeric formulation thereof, for treatment of an ocular disorder (e.g., AMD, GA, DME, DR, or RVO) include corticosteroids, angiostatic steroids, anecortave acetate, angiostatin, endostatin, tyrosine kinase inhibitors, matrix metalloproteinase (MMP) inhibitors, insulin-like growth factor-binding protein 3 (IGFBP3), stromal derived factor (SDF-1) antagonists (e.g., anti-SDF-1 antibodies), pigment epithelium-derived factor (PEDF), gamma-secretase, Delta-like ligand 4, integrin antagonists, hypoxia-inducible factor (HIF)-1α antagonists, protein kinase CK2 antagonists, agents that inhibit stem cell (e.g., endothelial progenitor cell) homing to the site of

neovascularization (e.g., an anti-vascular endothelial cadherin (CD-144) antibody and/or an anti-SDF-1 antibody), and combinations thereof.

[00151] In some embodiments, a bispecific antibody of the present disclosure, or an antibody conjugate, fusion protein, and/or polymeric formulation thereof, can be administered in combination with an agent that has activity against neovascularization for treatment of an ocular disorder (e.g., AMD, GA, DME, DR, or RVO), such as an anti-inflammatory drug, a mammalian target of rapamycin (mTOR) inhibitor (e.g., rapamycin, AFINITOR® (everolimus), and TORISEL® (temsirolimus)), cyclosporine, a tumor necrosis factor (TNF) antagonist (e.g., an anti-TNFα antibody or antigen-binding fragment thereof (e.g., infliximab, adalimumab, certolizumab pegol, and golimumab) or a soluble receptor fusion protein (e.g., etanercept)), an anti-complement agent, a nonsteroidal anti-inflammatory agent (NSAID), or combinations thereof.

[00152] Any suitable AMD therapeutic agent can be administered as an additional therapeutic agent in combination with a bispecific antibody of the present disclosure, or an antibody conjugate, fusion protein, and/or polymeric formulation thereof, for treatment of an ocular disorder (e.g., AMD, GA, DME, DR, or RVO), including, but not limited to, a VEGF antagonist, for example, an anti-VEGF antibody (e.g., LUCENTIS® (ranibizumab), RTH-258 (formerly ESBA-1008, an anti-VEGF single-chain antibody fragment; Novartis), or a bispecific anti-VEGF antibody (e.g., an anti-VEGF/anti-angiopoeitin 2 bispecific antibody such as RG-7716; Roche)), a soluble VEGF receptor fusion protein (e.g., EYLEA® (aflibercept)), an anti-VEGF DARPin® (e.g., abicipar pegol; Molecular Partners AG/Allergan), or an anti-VEGF aptamer (e.g., MACUGEN® (pegaptanib sodium)); a platelet-derived growth factor (PDGF) antagonist, for example, an anti-PDGF antibody, an anti-PDGFR antibody (e.g., REGN2176-3), an anti-PDGF-BB pegylated aptamer (e.g., FOVISTA®; Ophthotech/Novartis), a soluble PDGFR receptor fusion protein, or a dual PDGF/VEGF antagonist (e.g., a small molecule inhibitor (e.g., DE-120 (Santen) or X-82 (TyrogeneX)) or a bispecific anti-PDGF/anti-VEGF antibody)); VISUDYNE® (verteporfin) in combination with photodynamic therapy; an antioxidant; a complement system antagonist, for example, a complement factor C5 antagonist (e.g., a small molecule inhibitor (e.g., ARC-1905; Opthotech) or an anti-C5 antibody (e.g., LFG-316; Novartis), a properdin antagonist (e.g., an anti-properdin antibody, e.g., CLG-561; Alcon), or a complement factor D antagonist (e.g., an anti-complement factor D antibody, e.g., lampalizumab; Roche)); a visual cycle modifier (e.g., emixustat hydrochloride); squalamine (e.g., OHR-102; Ohr Pharmaceutical); vitamin and mineral

supplements (e.g., those described in the Age-Related Eye Disease Study 1 (AREDS1; zinc and/or antioxidants) and Study 2 (AREDS2; zinc, antioxidants, lutein, zeaxanthin, and/or omega-3 fatty acids)); a cell-based therapy, for example, NT-501 (Renexus); PH-05206388 (Pfizer), huCNS-SC cell transplantation (StemCells), CNTO-2476 (Janssen), OpRegen (Cell Cure Neurosciences), or MA09-hRPE cell transplantation (Ocata Therapeutics); a tissue factor antagonist (e.g., hl-con1; Iconic Therapeutics); an alpha-adrenergic receptor agonist (e.g., brimonidine tartrate); a peptide vaccine (e.g., S-646240; Shionogi); an amyloid beta antagonist (e.g., an anti-beta amyloid monoclonal antibody, e.g., GSK-933776); an S1P antagonist (e.g., an anti-S1P antibody, e.g., iSONEP™; Lpath Inc); a ROBO4 antagonist (e.g., an anti-ROBO4 antibody, e.g., DS-7080a; Daiichi Sankyo); a lentiviral vector expressing endostatin and angiostatin (e.g., RetinoStat); and any combination thereof. In some instances, AMD therapeutic agents (including any of the preceding AMD therapeutic agents) can be co-formulated. For example, the anti-PDGFR antibody REGN2176-3 can be co-formulated with aflibercept (EYLEA®). In some instances, such a co-formulation can be administered in combination with an antibody of the present disclosure. In some instances, the ocular disorder is AMD (e.g., wet AMD).

[00153] In addition to therapeutic uses, a bispecific antibody or antigen-binding fragment, described herein can be used in diagnostic or research applications. Research applications include, for example, methods that utilize the bispecific antibody and a label to detect the corresponding antigen(s) in a sample, e.g., in a human body fluid or in a cell or tissue extract. The bispecific antibody or antigen-binding fragment thereof may be employed in any suitable assay for measuring a corresponding antigen(s) in a sample for diagnostic and/or research purposes. Such assays include, but are not limited to, sandwich immunoassays, enzyme immunoassays (EIA), enzyme-linked immunosorbent assays (ELISA), lateral flow assays, competitive inhibition immunoassays (e.g., forward and reverse), competitive binding assays, Forster resonance energy transfer (FRET), one-step antibody detection assays, single molecule detection assays, radioimmunoassays (RIA), and FACS. Such methods are disclosed in, for example, U.S. Patents 6,143,576; 6,113,855; 6,019,944; 5,985,579; 5,947,124; 5,939,272; 5,922,615; 5,885,527; 5,851,776; 5,824,799; 5,679,526; 5,525,524; and 5,480,792; and Adamczyk et al., *Anal. Chim. Acta*, *579*(1): 61-67 (2006).

[00154] The bispecific antibody or antigen-binding fragment thereof can be provided in a kit, e.g., a packaged combination of reagents in predetermined amounts with instructions for

performing an assay using the antibody (e.g., an assay that detects a corresponding antigen (s)). As such, the disclosure provides a kit comprising the antibody or antigen-binding fragment described herein and instructions for use thereof. The instructions can be in paper form or computer-readable form, such as a disk, CD, DVD, etc. Alternatively or additionally, the kit can comprise a calibrator or control, and/or at least one container (e.g., tube, microtiter plates, or strips) for conducting an assay, and/or a buffer, such as an assay buffer or a wash buffer. Ideally, the kit comprises all components, i.e., reagents, standards, buffers, diluents, etc., which are necessary to perform the assay. Other additives may be included in the kit, such as stabilizers, buffers (e.g., a blocking buffer or lysis buffer), and the like. The relative amounts of the various reagents can be varied to provide for concentrations in solution of the reagents which substantially optimize the sensitivity of the assay. The reagents may be provided as dry powders (typically lyophilized), including excipients which on dissolution will provide a reagent solution having the appropriate concentration.

[00155] The following examples further illustrate the various embodiments of the present disclosure but should not be construed as in any way limiting its scope.

EXAMPLES

[00156] It will be readily apparent to those skilled in the art that other suitable modifications and adaptations of the methods of the present disclosure described herein are readily applicable and appreciable, and may be made using suitable equivalents without departing from the scope of the present disclosure or the aspects and embodiments disclosed herein. Having now described the present disclosure in detail, the same will be more clearly understood by reference to the following examples, which are merely intended only to illustrate some aspects and embodiments of the disclosure, and should not be viewed as limiting to the scope of the disclosure. The disclosures of all journal references, U.S. patents, and publications referred to herein are hereby incorporated by reference in their entireties.

[00157] The present disclosure has multiple aspects, illustrated by the following non-limiting examples.

EXAMPLE 1

[00158] Genetic Analysis of CFHR4 in Geographic Atrophy. This example describes analysis that was performed to determine the effects of CFHR1/4 deletions on Age-Related Macular Degeneration (AMD) in FinnGen. There are three common haplotypes composed of a variant in CFH (rs1061170 Y402H) and a variant that is an eQTL and pQTL for CFH and CFHR4 (rs10922109) that are associated with three different levels of risk. The high AMD risk haplotype (H402 + high CFHR4 expression, rs106117_C(ref)/ rs10922109_C(ref)) was set as the "reference" haplotype to allow comparison to other haplotypes (frequency in cases: 0.56, frequency in controls: 0.36). The haplotype carrying Y402 (the alternate allele at rs106117) and with High CFHR4/low CFH expression (reference allele at rs10922109) is associated with "medium" AMD risk (frequency in cases: 0.196, frequency in controls: 0.21). The "low" risk haplotype carries Y402 (the alternate allele at rs106117) and has low CFHR4/ high CFH expression (alternate allele at rs10922109), with a frequency in cases: 0.22, frequency in controls: 0.43). It was hypothesized that haplotypes that carry a CFHR1/4 deletion will have a different risk for AMD on the medium risk background.

[00159] Genetic variation at this locus provides a natural experiment to determine the effect of CFHR1/4 deletion on AMD. The CFHR1/4 deletion is not directly genotyped in FinnGen but there are variants (rs528922402 and rs188297593) that imperfectly tag ($r2 = 0.36$, $D' = 1$ in Finland) non-overlapping subsets of the deletion in Finnish populations in 1000Genomes dataset (HapMap phase3). The variant rs188297593 has a $D' < 1.0$ in HapMap Phase 3 samples of European ancestry (1 of 4 carriers are not tagging CFHR1/4 deletion). These two variants capture a subset but not all carriers of the deletion.

[00160] To determine the effect of the CFH variant (rs1061170), CFHR4/CFH eQTL/pQTL (rs10922109) and CFHR1/4 deletion (tagged by rs528922402 and rs188297593), AMD risk was examined for individuals from FinnGen R6. Haplotypes composed of the individual variants were generated and a logistic regression was run in R to predict the effect of the haplotype on AMD risk adjusting for sex, age, and PC's. The reference haplotype was used as reference such that all other haplotype effects are in relation to that one.

[00161] Consistent with the hypothesis that CFHR4 contributes directly to AMD risk, "medium" risk haplotypes with CFHR4 deleted conferred increased protection from AMD relative to "medium" risk haplotypes with intact CFHR4.

[00162] Table 1: Results from haplotype analysis in FinnGen showing AMD risk from each haplotype with Odds Ratio and p-values from logistic regression.

rs1061170 (C/T)	rs10922109 (C/A)	rs528922402 (GAA/G)	rs188297593 (T/A)	AMD cases	Controls	Frequency in Cases	Frequency in Controls	Odds Ratio	P-value
CFH risk variant	CFHR4 / CFH pQTL	CFHR1/4 deletion tagging variant	CFHR1/4 deletion tagging variant						
H402 (C)	High CFHR4/ low CFH (C)	-	-	5,447	218,864	0.5622	0.4336	1 (Ref)	-
Y402 (T)	High CFHR4/ low CFH (C)	-	-	1,452	75,112	0.1499	0.1488	0.75 [0.71, 0.80]	6e-19
Y402 (T)	High CFHR4/ low CFH (C)	-	CFHR1/4 deletion	100	6,188	0.0103	0.0123	0.65 [0.53, 0.80]	6e-05
Y402 (T)	High CFHR4/ low CFH (C)	CFHR1/4 deletion	-	43	4,011	0.0044	0.0079	0.42 [0.31, 0.57]	5e-08
Y402 (T)	Low CFHR4/ high CFH (A)	-	-	2,635	200,601	0.2720	0.3974	0.50 [0.48, 0.53]	2e-163

EXAMPLE 2

[00163] **Generation of recombinant CFHR4 proteins.** Recombinant protein preparations were undertaken to produce specific proteins which could be used as immunogens/antigens, screening reagents, and/or control reagents. All efforts were made in service of the goal of generating a panel of anti-CFHR4b antibodies with the desired properties.

[00164] Proteins with the sequence corresponding to human CFHR4b, human CFHL-1 wild type, human CFHL-1 with Tyrosine 402 mutated to Histidine, and cynomolgus CFHR4b were successfully produced with various protein tags. When finished, all protein preparations exceeded 90% purity by analytical methods and were less than <1 endotoxin unit per milliliter. Examples of final specifications for individual preparations are below.

[00165] Beginning with *in silico* analysis, appropriate wild type amino acid sequences of human and cynomolgus CFHR4b and human CFHL-1 were located and extracted from publicly available databases. The sequences were then further analyzed and modified manually using Geneious Prime software in accordance with the project plan. Sequences were examined for liabilities and modified to add further amino acid sequence which encoded for "tags" to facilitate purification, lower immunogenicity, or simplify analytical screening. Examples of protein tags used in this work include the HIS tag, a proprietary mouse IgG Fc tag, and the Avi tag. Tags were separated from each other and from the CFHR4b or CFHL-1 sequence with short linker sequences. All tags were added to the C-terminal end of the sequences. Additionally, the native signal peptide was removed and replaced with a signal peptide conducive to recombinant expression.

[00166] After all modifications were complete, the amino acid sequences were back translated into DNA sequences and optimized for the codon biases found in the human genome. These optimized DNA sequences were sent to Integrated DNA Technologies and produced as DNA fragment(s) with DNA overhangs added to the 5' and 3' ends. Utilizing the DNA overhangs and the Gibson cloning method, these DNA fragments were assembled into the expected sequence and cloned into a mammalian expression plasmid driven by a CMV promoter. The plasmid was propagated in E. coli with appropriate antibiotic selection and prepared, at a scale useful for recombinant expression, utilizing commercially available preparation kits purchased from Qiagen. The sequence of the plasmid and the expression gene was then confirmed using Sanger sequencing.

[00167] Using polyethylenimine, the sequence verified plasmid was transfected into human embryonic kidney cells adapted for recombinant expression. One day after transfection, the cells were supplemented with chemicals and nutrients designed to increase recombinant protein expression. These supplements include sodium propionate, valproic acid, glucose, glutamine, and a variety of yeast lysates. Five days after transfection, the expressing cell cultures were harvested. As the recombinant protein is secreted into the growth medium, the cells, cell fragments, and cell debris, were removed via centrifugation and filtration through a membrane with pores no greater than 0.22 microns. The clarified culture medium, conditioned with the recombinant protein, was now ready for purification.

[00168] Using a FPLC (Fast pressure liquid chromatography) and the appropriate commercially available pre-packed affinity chromatography column for the C-terminal tag(s) the protein of interest was purified from the cell culture medium and immobilized on the chromatography

column. For HIS tagged proteins, a Ni-NTA agarose column was used. For Fc tagged proteins, a proA agarose column was employed. Multiple column washes followed, each specific for the type of column/tag/chromatography. The protein of interest was eluted from the column with 300 mM of imidazole for HIS tagged proteins, and with 100 mM Citrate pH 3.5 for Fc tagged proteins. Following elution, the Fc tagged proteins were adjusted to a neutral pH using 1M Hepes pH 9. Neutralization was unnecessary for HIS tagged proteins, as the elution buffer is at a neutral pH.

[00169] Protein quality and quantity were assessed using a combination of SDS-PAGE gel electrophoresis, spectrophotometry, and analytical-SEC (size exclusion chromatography). Most proteins for this project required further purification. To further polish the proteins, the FPLC and a second chromatography column were employed. Separation by size, accomplished with a size exclusion column, enabled increased protein purities up to >90%. SEC also enabled buffer exchange out of the affinity chromatography elution buffer and into the final buffer of choice (PBS). The protein sample then moved onto quality control. If, at any point during purification, protein concentration needed to be increased, Amicon Ultra molecular weight cutoff (MWCO) filtration units were used to concentrate protein by separating protein from buffer. MWCO was chosen to ensure compatibility with the size of the protein of interest. Before moving to final quality control, all final samples were concentrated to > 1 milligram per milliliter.

[00170] Endotoxin contamination in the final protein sample was assayed using Charles River's Endosafe PTS system. Spectrophotometry determined the final protein concentration. Three micrograms of the final sample were injected onto an analytical SEC column (YMC Diol 300) to determine its final purity. Additionally, sometimes SDS-PAGE electrophoresis was performed to determine final quality. Once all final metrics passed, the protein was sterilized in a biosafety cabinet using a sterile 0.22 micron filter. This was followed by sterile aliquoting and flash freezing in liquid nitrogen before storage at -80°C.

EXAMPLE 3

[00171] **Recovery of CFHR4 antibody sequences from immunized mice**. CFHR4 Immunization: Three cohorts of Alloy Therapeutic transgenic humanized mice (ATX-GK) were immunized with human CFHR4b using the following 5-week protocols (FIGS. 3A-3C):

[00172] Cohort 1: 5 ATX-GK mice immunized with human CFHR4B (ATX-P-57) using standard 5-week RIMMS protocol of 10 ug subcutaneous dosing of antigen emulsified in complete

Freund's adjuvant followed by 5 weekly subcutaneous dosing of antigen emulsified in incomplete Freund's adjuvant. Cohort 2: 5 ATX-GK mice immunized with human CFHR4B (ATX-P-57) using 5-week RIMMS protocol of weekly 10 ug subcutaneous dosing of antigen emulsified in incomplete Freund's adjuvant. Cohort 3: 5 ATX-GK mice immunized with human CFHR4B (ATX-P-57) using 5-week RIBI IP protocol of weekly 10 ug Intraperitoneal dosing of antigen emulsified in RIBI adjuvant.

[00173] Sample bleeds were taken at week four and tested for antigen positive serum titer and purification tag negative serum titer by ELISA. ELISA plates were coated with either 1ug/ml of CFHR4 immunogen or an irrelevant protein (P114) with the same purification tag as the immunogen. Antigen coated plates were incubated with seven 10-fold serial dilutions of sera starting at 1:300. Antibodies bound to antigen were detected by anti-mouse IgG HRP secondary antibody and one step TMB solution. The absorbance signal at 450 nm was measured with an ELISA microplate reader.

[00174] *Hybridoma*: Immune tissues from high titer mice were harvested and preserved for antibody discovery. Hybridoma cell lines producing CFHR4 antibodies were produced by fusion of single B Cells from spleen and lymph nodes of titer positive mice with myeloma cells. Twenty 96 well plates of hybridoma fusions were generated and expanded. Hybridomas expressing CFHR4 specific antibodies were detected by antigen binding by ELISA. Affinity of antibodies in the hybridoma supernatants were measured by SPR using the Octet instrument. CFHR4 antibodies in hybridoma supernatant were loaded on a biosensor. Response was measured as a nm shift in the interference pattern and was proportional to the number of antibodies bound to the surface of the biosensor. The binding interaction of CFHR4 to the immobilized antibodies was measured as association (kon). Following analyte association, the biosensor was dipped into PBS without CFHR4, and the bound antigen was allowed to dissociate from the antibody (kdis). KD (M), or affinity of the antibodies for CFHR4 was measured as kdis/kon. Heavy and light chains from validated hybridomas were sequenced. RNA was isolated from CFHR4 antibody secreting hybridomas and heavy and light chain variable regions were cloned by reverse transcription using gene specific primers followed by PCR amplification with variable chain gene specific primers. PCR products were sequenced by standard Sanger sequencing methods.

[00175] *Phage Display*: Variable heavy and light chains were amplified from the spleen of high titer immunized mice by reverse transcription using gene specific primers followed by PCR

amplification with variable chain gene specific primers. Variable regions were cloned into a phage display vector designed to express Fabs on phage g3p protein. Libraries of phage expressing unique Fabs were amplified and purified. Phage were allowed to bind to biotinylated CFHR4 antigens captured on streptavidin magnetic beads. Phage remaining bound to antigen beads after several stringent washes was eluted using a basic triethylamine solution and neutralized with Tris buffer pH 8.0. Eluted phages were reinfected into TG1 bacterial cells, amplified by co-infection with M13 helper phage, and purified by PEG precipitation. Purified phages expressing Fabs were selected for antigen binding as described. Phage from the second round were diluted and infected into TG1 cells. Polyclonal pools of phage output from two rounds of panning were tested by ELISA to confirm that the pools contained CFHR4-specific phage. Variable heavy and light chain regions were sequenced from single infected bacterial colonies using a rolling circle amplification and standard Sanger sequencing.

[00176] *Antibody Sequencing*: Unique variable heavy and light chain pairs from hybridoma and phage display campaigns were cloned into vectors designed to express full length antibodies as IgGs in HEK293 cells under the control of a CMV promoter. Antibody expression vectors were complexed with polyethylenimine and transfected into HEK293 cultures. After 5 days of shaking at 37 °C in 293 cell culture media, antibodies were captured on agarose-based protein A resin. After several stringent washes, antibodies were eluted in glycine solution, pH 3, neutralized with hepes, pH 9, and buffer exchanged into PBS.

EXAMPLE 4

[00177] **Human CFHR4 monoclonal antibody differential scanning fluorimetry (DSF).** Development of effective monoclonal antibodies depends not only on their biological activity but also on their physicochemical properties, such as homogeneity and stability. mAb stability can be affected by their formulation. Among the many techniques used to study the stability of mAbs, differential scanning fluorimetry (DSF) offers both excellent throughput and minimal material consumption. DSF measures the temperature of the protein unfolding transition (Tm) based on the change in fluorescence intensity of an environmentally sensitive dye.

[00178] Experiments were conducted to assess the thermal stability of the human CFHR4 monoclonal antibodies ("ATX" antibodies) of the present disclosure by determining the melting temperature. Thermal stability was assessed via differential scanning fluorimetry (DSF) utilizing

the Protein Thermal Shift (PTS) assay from Applied Biosystems. The assay was performed according to the manufacturer's instruction. Briefly, the antibody to be evaluated was prepared in triplicate by mixing with Protein Thermal Shift dye and buffer; a real-time melt experiment from 25 °C to 95 °C was run on QuantStudio 3. Data was analyzed by using Protein Thermal Shift Software and the melting temperature (Tm) was calculated from the melt curve (FIG. 4).

[00179] Table 2: DSF analysis of human anti-CFHR4 monoclonal antibodies.

Protein Thermal Shift Assay Results		
Sample ID	**Tm D - Mean**	**Tm 2 - Mean**
ATX-P-101	70.86	
ATX-P-560	61.92	
ATX-P-561	61.78	70.40
ATX-P-562	62.34	72.79
ATX-P-563	61.85	
ATX-P-564	61.71	
ATX-P-565	61.92	72.16
ATX-P-566	61.36	75.03
ATX-P-568	60.59	
ATX-P-569	61.78	
ATX-P-570	62.06	84.01
ATX-P-572	61.78	82.26
ATX-P-573	62.62	
ATX-P-574	61.78	
ATX-P-576	62.83	
ATX-P-577	61.85	
ATX-P-578	61.29	
ATX-P-579	62.40	
ATX-P-580	61.77	
ATX-P-582	61.84	76.00
ATX-P-583	61.56	72.22
ATX-P-587	62.19	80.49
ATX-P-588	61.42	
ATX-P-591	61.56	
ATX-P-592	61.21	82.10
ATX-P-594	62.04	
ATX-P-595	61.90	
ATX-P-596	61.90	74.80
ATX-P-597	63.51	
ATX-P-598	60.99	68.63
ATX-P-600	60.77	79.14
ATX-P-602	61.34	85.66
ATX-P-603	61.27	
ATX-P-604	61.54	
ATX-P-607	62.03	
ATX-P-608	61.12	
ATX-P-609	61.54	82.28

EXAMPLE 5

[00180] CFHR4 Antibody Cross-Blocking. High-throughput epitope binning experiments were conducted on real-time label-free biosensors (Carterra LSA) to sort large panels of mAbs into bins based on their ability to block one another for binding to the antigen. In a pairwise epitope binning analysis, antigen and antibody 2 (analyte antibody) are sequentially applied to the sensor chip (HC200M) covalently pre-loaded with antibody 1 (ligand antibody). An increase in response upon exposure to the analyte antibody indicates non-competition between the two antibodies, whereas a lack of change in the signal indicates competition. Antibodies having the same blocking profiles towards others in the test set are grouped into one bin. Community network plots are used to explore clustering of mAbs that share similar but not necessarily identical competition profiles. Rather than relying strictly on the sandwiching/blocking assignments in the heat map (FIG. 5A), as the Bin network plots do, hierarchical clustering is applied to the sorted heat map to generate network plots (FIG. 5B), which progressively group mAbs.

EXAMPLE 6

[00181] CFHR4 Antibody Binding Kinetics. Kinetic experiments were performed on Carterra LSA with a running buffer of PBS pH 7.40, 1% BSA, 0.05% Tween20. Antibodies were covalently printed on a HC30M chip. The chip was activated with 33 mM s-NHS and 133 mM EDC in 100 mM MES pH 5.5 for 7 minutes. Antibodies at 10 mg/ml in acetic acid buffer pH 4.5 were used for printing for 10 min. The printed chip was then quenched with 1 M ethanolamine pH 8.5 for 7 min. For kinetics analysis, purified recombinant his tagged protein ATX-P-57, human CDFR4B-His, at a concentration from 0.076 nM to 1500 nM (a serial 3-fold dilution) was injected sequentially. For each concentration, there was 5 min association followed by 15 min dissociation. Results were processed and analyzed in Carterra LSA Kinetics Software. The kinetic data was referenced with the interstitial reference spots and double-referenced to a buffer cycle, and then fit globally to a 1:1 binding model to determine their apparent association and dissociation kinetic rate constants (ka and kd values). The ratio kd/ka was used to derive the KD value of each antigen/mAb interaction, i.e., KD=kd/ka (FIG. 6).

EXAMPLE 7

[00182] **CFHR4 Antibody Cross Reactivity.** Experiments were conducted to determine the reactivity of the CFHR4 antibodies of the present disclosure (developed using CFHR4b antigen; see Example 3) with various other CFHR4 proteins. As shown in FIG. 7, experiments were conducted to determine the reactivity of the CFHR4 antibodies with the Cynomolgus monkey CFHR4b protein (cCFHR4b). The binding experiments were performed on Carterra LSA with a running buffer of PBS pH 7.40, 1% BSA, 0.05% Tween20. Antibodies were covalently printed on a HC30M chip. Chip was activated with 33 mM s-NHS and 133 mM EDC in 100 mM MES pH 5.5 for 7 Min . Antibodies at 10 mg/ml in acetic acid buffer pH 4.5 were used for printing for 10 min. The printed chip was then quenched with 1 M ethanolamine pH 8.5 for 7 min. For the reactivity assay, ATX-P-141, cyno CFHR4B-mFc, at 160 nM was tested with 5 min association followed by 15 min dissociation. Results were processed and analyzed in Carterra LSA Kinetics Software. The data was referenced with the interstitial reference spots and double-referenced to a buffer cycle, and then the responses (nm) after association were reported. Isotype control was used to determine the cutoff response for positive binding.

[00183] Experiments were also conducted to determine the reactivity of the CFHR4 antibodies with the human CFHR4a protein (FIG. 8). The binding experiments were performed on Carterra LSA with a running buffer of PBS pH 7.40, 1% BSA, 0.05% Tween20. Antibodies were covalently printed on a HC30M chip. Chip was activated with 33 mM s-NHS and 133 mM EDC in 100 mM MES pH 5.5 for 7 minutes. Antibodies at 10 mg/ml in acetic acid buffer pH 4.5 were used for printing for 10 min. The printed chip was then quenched with 1 M ethanolamine pH 8.5 for 7 min. For the reactivity assay, ATX-P-56, human CFHL4A-His, at 540 nM was tested with 5 min association followed by 15 min dissociation. Results were processed and analyzed in Carterra LSA Kinetics Software. The data was referenced with the interstitial reference spots and double-referenced to a buffer cycle, and then the responses (nm) after association were reported. Isotype control was used to determine the cutoff response for positive binding.

[00184] Experiments were also conducted to determine the reactivity of the CFHR4 antibodies with the human CFHR3 protein (FIG. 9). The binding experiments were performed on Carterra LSA with a running buffer of PBS pH 7.40, 1% BSA, 0.05% Tween20. Antibodies were covalently printed on a HC30M chip. Chip was activated with 33 mM s-NHS and 133 mM EDC in 100 mM MES pH 5.5 for 7 minutes. Antibodies at 10 mg/ml in acetic acid buffer pH 4.5 were used for

printing for 10 min. The printed chip was then quenched with 1 M ethanolamine pH 8.5 for 7 min. For the reactivity assay, ATX-P-58, human CFHL3-His, at 550 nM was tested with 5 min association followed by 15 min dissociation. Results were processed and analyzed in Carterra LSA Kinetics Software. The data was referenced with the interstitial reference spots and double-referenced to a buffer cycle, and then the responses (nm) after association were reported. Isotype control was used to determine the cutoff response for positive binding.

[00185] Experiments were also conducted to determine the reactivity of the CFHR4 antibodies with the human CFHL-1 (Y402H) protein (FIG. 10). The binding experiments were performed on Carterra LSA with a running buffer of PBS pH 7.40, 1% BSA, 0.05% Tween20. Antibodies were covalently printed on a HC30M chip. Chip was activated with 33 mM s-NHS and 133 mM EDC in 100 mM MES pH 5.5 for 7 minutes. Antibodies at 10 mg/ml in acetic acid buffer pH 4.5 were used for printing for 10 min. The printed chip was then quenched with 1 M ethanolamine pH 8.5 for 7 min. For the reactivity assay, ATX-P-421, human CFHL1-Y402H-His, at 380 nM was tested with 5 min association followed by 15 min dissociation. Results were processed and analyzed in Carterra LSA Kinetics Software. The data was referenced with the interstitial reference spots and double-referenced to a buffer cycle, and then the responses (nm) after association were reported. Isotype control was used to determine the cutoff response for positive binding.

EXAMPLE 8

[00186] **C3 Convertase Assembly assay.** A screening assay was developed to evaluate the ability of the CFHR4 antibodies of the present disclosure to affect C3 convertase formation (FIG. 11A). C3bBb is the C3 convertase (EC 3.4.21.43) of the alternative pathway of complement activation. The C3 enzyme is responsible for amplification of pathway activation and for deposition on target cells of C3b and the membrane attack complex. It is controlled by the serum proteins Factor H, Factor I (EC 3.4.21.45), and properdin. The formation of C3 convertase requires C3b, Factor B, Factor D (EC 3.4.21.46), and Mg2+. After formation of the reversible, bimolecular complex C3bB(Mg), Factor D cleaves Factor B, releasing the activation fragment Ba, and generates the active enzyme C3bBb. The C3 enzyme is a serine protease whose catalytic site resides in the Bb subunit. Additionally, CFHR4 has been reported to directly promote C3 convertase formation by binding to C3b, with stronger ability to assemble C3bBb on CFHR4, and with C3bBb-CFHR4 complex being more resistant to CFH cleavage in comparison with C3bBb.

[00187] Thus, the assay is designed to test the ability of a CHFR4 antibody to disrupt the formation of the C3 convertase complex by measuring the amount of Factor B that is present using an anti-FB monoclonal antibody conjugated to a reporter moiety. As illustrated in FIG. 11A, in the presence of CFHR4 (absence of an effective CFHR4 antibody), the C3 convertase complex is formed and the anti-FB antibody binds FB and a signal is detected (i.e., complement activation). However, in the presence of an effective anti-CFHR4 antibody, the C3 convertase complex is disrupted and the antibody-bound FB is washed away, resulting in a decreased signal (i.e., no complement activation).

[00188] An example of the assay protocol is provided below:

[00189] Preparation of FHR-4 coated plates – (1) Coat plates with 5 µg/ml FHR-4 in PBS, incubate in plastic bag with moist paper O/N in RT. (2) Wash 3 x 300 µl with Wieslab wash buffer. (3) Block wells with 150 µl 3% BSA in PBS. (4) Incubate for a minimum of 1 h RT. (5) Aspirate wells and wash with Superblock 1 x 300 µl. (6) Dry plates at 37°C, 16% RH, for at least 1 h. (7) Store in plate bags in fridge.

[00190] Assay protocol – (1) Bring diluent, plate, substrate, and stop solution to RT. (2) Dilute anti-OVA antibody to desired concentrations in AP diluent. (3) Add 50 µl Anti-OVA, AP diluent (blank), and diluent control to the plate. (4) Incubate with lid for 1 h at RT. (5) Wash with Wieslab wash buffer 3 x 300 µl. (6) Add 50 µl C3b at 5 µg/ml or AP diluent to the plate. (7) Incubate the plate at 37°C for 30 min. (8) Wash with Wieslab wash buffer 3 x 300 µl. (9) Add 50 µl protein mix (FB, FD, Properdin) to the plate. (10) Incubate the plate at 37°C for 30 min. (11) Wash with Wieslab wash buffer 3 x 300 µl. (12) 50 µl anti-factor B antibody diluted 1:2000 in AP diluent were added to the whole plate. (13) Incubate the plate at RT for 1 h. (14) Wash with Wieslab wash buffer 3 x 300 µl. (15) Add 50 µl Rabbit anti-goat IgG-HRP antibody diluted 1:5000 in Stabilzyme to the whole plate. (16) Incubate the plate at RT for 1 h. (17) Wash with Wieslab wash buffer 3x300 µl. (18) 50 µl substrate were added to the whole plate. (19) Incubate the plate at RT for 20 min. (20) 50 µl stop solution were added to the whole plate. (21) The plate was read at 450 – 620 nm.

[00191] As shown in FIG. 11B, dose response curves were generated for the top 8 inhibitory antibodies screened in the C3 Convertase Assembly assay. The percent C3 Convertase activity is plotted relative to negative control (diluent only). FIG. 11C includes the IC50 values calculated

for each antibody tested in FIG. 11B. And FIG. 11D provides a representative summary of data demonstrating at least three functional classes of anti-CFHR4 antibodies.

EXAMPLE 9

[00192] **Recovery of C3 antibody sequences from immunized mice**. C3 antibody sequences were recovered from immunized mice followed by phage display with either fixed or diverse light chains. Selected leads were produced as full aglyco IgG1s and extensively characterized.

[00193] ***C3 Recombinant Proteins***. C3 proteins were procured from Complement Technologies (Tyler, TX); the proteins were purified directly from the relevant species (human or cynomolgus) sera. Recombinant proteins were qualified with analytic SEC and binding studies to established antibodies.

[00194] ***C3 Immunization***. Two cohorts of Alloy Therapeutics transgenic humanized mice, ATX-GK Mix, were immunized with either human C3 or cynomolgus C3 using the following 5 week protocols: *Cohort 1*: 5 ATX-GX mix mice immunized with human C3 (REA23) using standard 5-week RIMMS protocol with 10 ug subcutaneous dosing of antigen. The first dose was emulsified in complete Freund's adjuvant with 4 follow on weekly 10 ug doses in incomplete Freund's adjuvant. *Cohort 2*: As Cohort 1 but with cynomolgus C3 (REA20).

[00195] Sample bleeds were conducted at the fourth week and tested for antigen positive titer and cross reactive titer (human for cynomolgus cohort or cynomolgus for human cohort). ELISA plates were coated with 1 ug/ml of relevant recombinant protein overnight. Coated plates were incubated with sera across a descending 5 x 10-fold range starting at 1:100 and terminating at 1:10E7 dilutions. Antibodies bound to the coated antigen were detected with anti-mouse IgG HRP secondary antibody and quantified with the aid of one step TMB solution and OD determination at 450 nM using a microplate reader. Note, the positive control antibody used for the ELISA experiment is not cross reactive to the cyno C3 protein (FIGS. 12A-12D).

[00196] ***Antibody Sequence Recovery - Phage Display***. Spleen tissues from high titer mice were preserved at harvest for sequence recovery via phage display. RNA was extracted from said tissues. Two sequence recovery strategies were used in this study, a fixed light strategy and a diverse light chain strategy. For both strategies, variable heavy chains were amplified from the RNA prepared from the spleen tissues via reverse transcription. Following reverse transcription, viable gene specific primers and PCR were used to create DNA fragments which could be cloned

into a phage display vector designed to express Fabs on phage g3p protein. For the diverse light chain strategy, the same approach was used to amplify the natural diversity of the light chain from the spleen RNA and clone into the Fab vector. For the fixed light chain strategy, the relevant part of the Fab vector was fixed to two specific sequences with constructs synthesized commercially that match the LC of ATX-P-569 and ATX-P-592.

[00197] Once complete, the libraries of phage expressing unique Fabs or Fabs with fixed light chains were amplified, purified, and depleted on non-specific binders. Phage were allowed to bind to biotinylated C3 antigens (human and/or cyno) captured on streptavidin magnetic beads. Phage remaining bound to antigens beads after several stringent washes was eluted using a basic triethylamine solution and neutralized with Tris buffer pH 8.0. Eluted phages were reinfected into TG1 bacterial cells, amplified by co-infection with M12 helper phage, and purified by PEG precipitation. A small sample was saved for polyclonal analysis. Purified phages expressing Fabs were selected for antigen binding as described earlier in a subsequent 2nd round. Phage from the second round output were diluted and infected in TG1 cells. Polyclonal pools of phage output from both rounds were tested by ELISA to confirm enrichment and examine cross reactivity (FIG. 13).

[00198] Follow on monoclonal ELISA on individual colonies was conducted and from this second ELISA, clones were identified for rolling circle amplification and Sanger Sequencing of the variable heavy and light chain regions of the Fab where appropriate (for diverse libraries only, for fixed LC libraries only sequencing the HC was required). From the sequence analysis, a group of clones were advanced for reformatting into full length antibodies. The selected group broadly represented the clonotype diversity discovered in both the fixed/cLC and diverse libraries. In total, 113 paired variable heavy and light chain sequences were put into production across the fixed and diverse libraries.

[00199] ***Antibody Production.*** Unique variable heavy and light chain pairs from the phage display campaigns were cloned into vectors designed to express full length antibodies as algyco IgG1s in HEK293 cells under the control of a CMV promoter. Antibody expression vectors were complexed with polyethylenimine and transfected into HEK293 cultures. After 5 days of shaking at 37 C in 293 cell culture media, antibodies were captured on agarose-based protein A resin. After several stringent washes, antibodies were eluted in citrate solution, pH 3, neutralized with Hepes, pH 9, and buffer exchanged into PBS.

EXAMPLE 10

[00200] ***C3 Antibody Binding Kinetics.*** Experiments were conducted to determine the binding kinetics of anti-C3 antibodies, species cross-reactivity, and epitope cross-blocking.

[00201] Kinetic experiments were performed on Carterra LSA with a running buffer of PBS pH 7.40, 1% BSA, 0.05% Tween20. Antibodies were captured on an anti-human Fc capture chip prepared with an HC30M chip. For kinetics analysis, C3a, C3b from Complement Technology, or C3-His from Acro Biosystems, were injected sequentially at a concentration from 0.076 nM to 1500 nM (a serial 3-fold dilution). For each concentration, there was a 5 Min association followed by 15 Min dissociation. Results were processed and analyzed in Carterra LSA Kinetics Software. The kinetic data was referenced with the interstitial reference spots and double-referenced to a buffer cycle, and then fit globally to a 1:1 binding model to determine their apparent association and dissociation kinetic rate constants (K_a and K_D values). The ratio K_D / K_a was used to derive the K_D value of each antigen/mAb interaction ($K_D = K_D / K_a$) (FIG. 14).

[00202] ***Cross-reactivity assay by SPRi.*** The binding experiments were performed on Carterra LSA with a running buffer of PBS pH 7.40, 1% BSA, 0.05% Tween20. Antibodies were covalently printed on an HC30M chip. Chip was activated with 33 mM s-NHS and 133 mM EDC in 100 mM MES pH 5.5 for 7 minutes. Antibodies at 10 mg/ml in acetic acid buffer pH 4.5 were used for printing for 10 min. The printed chip was then quenched with 1 M ethanolamine pH 8.5 for 7 min. For the reactivity assay, human C3, C3a, C3b, and cyno C3 from Complement Technology was tested with 5 Min association followed by 15 Min dissociation. Results were processed and analyzed in Carterra LSA Kinetics Software. The data was referenced with the interstitial reference spots and double-referenced to a buffer cycle, and then the responses (nm) after association were reported. Isotype control was used to determine the cutoff response for positive binding (FIGS. 15 and 16).

[00203] ***Epitope Binning.*** High-throughput epitope binning experiment was done on real-time label-free biosensors (Carterra LSA) to sort large panels of mAbs into bins based on their ability to block one another for binding to the antigen. In a pairwise epitope binning analysis, antigen and antibody 2 (analyte antibody) are sequentially applied to the sensor chip (HC200M) covalently pre-loaded with antibody 1 (ligand antibody). An increase in response upon exposure to the analyte antibody indicates non-competition between the two antibodies, whereas a lack of change in the signal indicates competition. Antibodies having the same blocking profiles towards others in the

test set are grouped into one bin. Community network plots are used to explore clustering of mAbs that share similar but not necessarily identical competition profiles. Rather than relying strictly on the sandwiching/blocking assignments in the heat map, as the Bin network plots do, hierarchical clustering is applied to the sorted heat map to generate dendrograms, which progressively group mAbs (FIGS. 17-18).

EXAMPLE 11

[00204] **C3 Antibody Polyreactivity.** Experiments were conducted to determine the reactivity of the C3 antibodies of the present disclosure with various other proteins using ELISA and Carterra LSA platforms (FIGS. 19 and 20). The methods used were similar to those reported by Hötzel et al. (2012). Briefly, baculovirus particles (BVP, Lake Pharma) was diluted 1:100 in 50 mM sodium bicarbonate (pH 9.3). After overnight incubation of 50 µL of BVP on ELISA plates (3369; Corning) at 4 °C overnight, unbound BVPs were aspirated from the wells. All remaining steps were performed at RT. The plate was blocked with 100 µL of blocking buffer (PBS with 1% BSA) for 1 h before three washes with 100 µL of PBS. Next, 50 µL of 16 nM testing antibodies was added to the wells and incubated for 1 h followed by washes with 100 µL of PBS. HRP-conjugated goat anti-human IgG antibody at 1:1000 (Jackson ImmunoResearch) was used as the secondary antibody, and incubated for 1 h followed by washes as before. Finally, 50 µL of TMB substrate (34021; Fisher Scientific) was added to each well and incubated for 10–15 min. The reactions were stopped by adding 50 µL of 2 M sulfuric acid to each well. The absorbance was read at 450 nm and BVP score determined by normalizing absorbance by control wells with no test antibody.

[00205] Additional experiments were conducted to determine the blocking potential of the C3 antibodies of the present disclosure for CFHR4 (FIG. 21B) and CFH (FIG. 21B).

[00206] **Sequences**

[00207] The various amino acid sequences and nucleic acid sequences referenced herein are provided below.

[00208] Table 3: Anti-CFHR4 antibodies (CDR sequences)

SEQ ID NO:	Antibody Name:	Descriptor:	Sequence:
VH Family: IGHV1			
1	-	HCDR1 Consensus	$X_1YX_2X_3X_4$ (X_1 is S, T, G, or N; X_2 is G or Y; X_3 is I or M; X_4 is S, H, or Q)

2	ATX-P-591	HCDR1	SYGIS
3	ATX-P-583	HCDR1	TYGIS
4	ATX-P-602	HCDR1	GYYMH
5	ATX-P-601	HCDR1	SYYMH
6	ATX-P-607	HCDR1	SYYMH
7	ATX-P-597	HCDR1	NYYMQ
8	-	HCDR2 Consensus	$X_1IX_2X_3X_4X_5GX_6TX_7X_8X_9X_{10}X_{11}X_{12}QX_{13}$ (X_1 is W or I; X_2 is S, N, or D; X_3 is A or P; X_4 is Y, N, or S; X_5 is N, G, or S; X_6 is N, S, or G; X7 is N, H, T, or S; X_8 is Y or N; X_9 is A or Y; X_{10} is Q or A; X_{11} is K or S; X_{12} is L or F; X_{13} is G or D)
9	ATX-P-591	HCDR2	WISAYNGNTNYAQKLQG
10	ATX-P-583	HCDR2	WISAYSGNTHYAQSLQD
11	ATX-P-602	HCDR2	WINPNSGGTNYAKKFQG
12	ATX-P-601	HCDR2	IINPSGGSTNYAQKFQG
13	ATX-P-607	HCDR2	IINPSGGSTSYAQKFQG
14	ATX-P-597	HCDR2	IIDPSGGSTTYAQKFQG
15	ATX-P-591	HCDR3	DLRGTAFDY
16	ATX-P-583	HCDR3	DEGYCSSTGCLNLFDP
17	ATX-P-602	HCDR3	GDTIFRLVTPLDY
18	ATX-P-601	HCDR3	DQSGGMDV
19	ATX-P-607	HCDR3	DPEYSSAFDI
20	ATX-P-597	HCDR3	DEGTDRPGWGY
VH Family: IGHV3			
21	-	HCDR1 Consensus	$X_1YX_2X_3X_4$ (X_1 is S, T, R, or D; X_2 is T, V, A, G, S, or E; X_3 is M or I; X_4 is N, S, or H)
22	ATX-P-564	HCDR1	SYTMN
23	ATX-P-568	HCDR1	SYVMS
24	ATX-P-574	HCDR1	SYAMS
25	ATX-P-565	HCDR1	TYGIH
26	ATX-P-578	HCDR1	RYSMN
27	ATX-P-588	HCDR1	DYAMH
28	ATX-P-600	HCDR1	DYAMH
29	ATX-P-569	HCDR1	DYAMH
30	ATX-P-596	HCDR1	DYAMH
31	ATX-P-576	HCDR1	DYEMH
32	-	HCDR2 Consensus	$X_1IX_2X_3X_4X_5X_6X_7X_8X_9X_{10}X_{11}DX_{12}VX_{13}G$ (X_1 is S, V, Y, G or D; X_2 is S or W; X_3 is S, V, G, H, or W; X_4 is S, D, N or T; X_5 is S or G; X_6 is S or G; X_7 is Y, S, T or R; X_8 is T, K, I or V; X_9 is Y, F, N, or G; X_{10} is Y or H; X_{11} is A or V; X_{12} is S or P; X_{13} is R, K, or T)
33	ATX-P-564	HCDR2	SISSSSSYTYYADSVRG
34	ATX-P-568	HCDR2	VISVSGGSTFYADSVRG
35	ATX-P-574	HCDR2	VISGSGGTTYYADSVKG
36	ATX-P-565	HCDR2	VIWHDGSSKNYVDSVTG
37	ATX-P-578	HCDR2	YISSSSSTIFHADSVKG
38	ATX-P-588	HCDR2	GISWNSGSIGYADSVKG
39	ATX-P-600	HCDR2	GISWSGGSIGYADSVKG
40	ATX-P-569	HCDR2	GISWNSGSIGYADSVKG
41	ATX-P-596	HCDR2	GISWTGGSVGYADPVKG
42	ATX-P-576	HCDR2	DISRNSGRIGYADSVKG
43	ATX-P-564	HCDR3	SASIAAGMDV
44	ATX-P-568	HCDR3	DGLAVAGFDH

45	ATX-P-574	HCDR3	RGDYGDYMDV
46	ATX-P-565	HCDR3	RGNWNYGFYYYYMDV
47	ATX-P-578	HCDR3	GNWNYYYMDV
48	ATX-P-588	HCDR3	DRDDGYNYAGVFDY
49	ATX-P-600	HCDR3	DREDGYNYGGVFDY
50	ATX-P-569	HCDR3	DIGNGYTKGDVFDI
51	ATX-P-596	HCDR3	DMGDGYSRNWPFDY
52	ATX-P-576	HCDR3	DIWGSGYFDY
VH Family: IGHV4			
53	-	HCDR1 Consensus	$X_1X_2X_3WX_4X_5$ (X_1 is T, S, G, or I; X_2 is S, R, Y, or H; X_3 is D, N, H, K or Y; X_4 is W or S; X_5 is T or S)
54	ATX-P-580	HCDR1	TSDWWT
55	ATX-P-579	HCDR1	TSNWWT
56	ATX-P-577	HCDR1	SSNWWT
57	ATX-P-608	HCDR1	SSNWWS
58	ATX-P-609	HCDR1	SSNWWS
59	ATX-P-603	HCDR1	GSHWWS
60	ATX-P-582	HCDR1	ISKWWS
61	ATX-P-598	HCDR1	SSNWWS
62	ATX-P-571	HCDR1	SRNWWS
63	ATX-P-570	HCDR1	GYYWS
64	ATX-P-563	HCDR1	SHYWS
65	-	HCDR2 Consensus	$X_1X_2X_3X_4X_5GX_6X_7X_8X_9X_{10}PLSX_{11}S$ (X_1 is E or Y; X_2 is I, T, or V; X_3 is Y, H, or F; X_4 is H or Y; X_5 is S, D, T, G; X_6 is S, T, G, or N; X_7 is T or I; X_8 is N or K; X_9 is Y, K, or S; X_{10} is N, S, K, or H; X_{11} is K or Q)
66	ATX-P-580	HCDR2	EIYHSGSTNYNPSLKS
67	ATX-P-579	HCDR2	EIYHDGSTNYSPSLQS
68	ATX-P-577	HCDR2	ETYHDGSTNYNPSLKS
69	ATX-P-608	HCDR2	EIYHTGSTNKKPSLKS
70	ATX-P-609	HCDR2	EIYHSGSTNYNPSLKS
71	ATX-P-603	HCDR2	EIYHTGSTNKNPSLKS
72	ATX-P-582	HCDR2	EIYHTGSTNYHPSLKS
73	ATX-P-598	HCDR2	EIYHSGTTNYNPSLKS
74	ATX-P-571	HCDR2	EIYHGGTTNYNPSLKS
75	ATX-P-570	HCDR2	YVHYSGGTKSNPSLKS
76	ATX-P-563	HCDR2	YIFYSGNINYNPSLKS
77	ATX-P-580	HCDR3	WYFDL
78	ATX-P-579	HCDR3	FYIDV
79	ATX-P-577	HCDR3	FYFDY
80	ATX-P-608	HCDR3	DREGGTTEAFDI
81	ATX-P-609	HCDR3	DQLSSGPTDAFDI
82	ATX-P-603	HCDR3	DQYTGSPRDAFDI
83	ATX-P-582	HCDR3	DELRLGELSPSLDI
84	ATX-P-598	HCDR3	DRLRLGESSSDVFDI
85	ATX-P-571	HCDR3	GGLRLGELSPNAFDI
86	ATX-P-570	HCDR3	ERYEWNSYFDY
87	ATX-P-563	HCDR3	DRGGSYSYHFDC
VH Family: IGHV6			
88	-	HCDR1 Consensus	SNX_1AX_2WN (X_1 is S, T, or N; X_2 is A or S)
89	ATX-P-566	HCDR1	SNSAAWN
90	ATX-P-594	HCDR1	SNSASWN

91	ATX-P-604	HCDR1	SNSAAWN
92	ATX-P-595	HCDR1	SNSAAWN
93	ATX-P-610	HCDR1	SNSAAWN
94	ATX-P-572	HCDR1	SNSAAWN
95	ATX-P-587	HCDR1	SNSAAWN
96	ATX-P-592	HCDR1	SNSAAWN
97	ATX-P-560	HCDR1	SNTAAWN
98	ATX-P-581	HCDR1	SNNAAWN
99	ATX-P-573	HCDR1	SNSAAWN
100	ATX-P-561	HCDR1	SNSAAWN
101	ATX-P-562	HCDR1	SNSAAWN
102	-	HCDR2 Consensus	$X_1TX_2YRSX_3X_4X_5X_6X_7X_8X_9X_{10}SX_{11}X_{12}S$ (X_1 is R, T, M, or K; X_2 is Y or F; X_3 is K or R; X_4 is W or L; X_5 is F, Y, or S; X_6 is N, S, D, or A; X_7 is N, V, G, D, Y, or A; X_8 is Y or F; X_9 is S, A, or P; X_{10} is V, L, or A; X_{11} is V or M; X_{12} is K or S)
103	ATX-P-566	HCDR2	RTYYRSKWFNNYSVSVKS
104	ATX-P-594	HCDR2	TTYYRSKWFNVYAVSVKS
105	ATX-P-604	HCDR2	RTYYRSKWFNGYAVSVKS
106	ATX-P-595	HCDR2	RTYYRSKWFNDYALSVKS
107	ATX-P-610	HCDR2	RTYYRSKWYNDYALSVKS
108	ATX-P-572	HCDR2	MTYYRSKWYSVFAVSVKS
109	ATX-P-587	HCDR2	KTYYRSKWYNYYALSVKS
110	ATX-P-592	HCDR2	RTYYRSKWYSDYPLSVKS
111	ATX-P-560	HCDR2	RTYYRSKWYNDYAVSVKS
112	ATX-P-581	HCDR2	RTYYRSKWYNAYAVSVKS
113	ATX-P-573	HCDR2	RTYYRSKLYSDYAVSVKS
114	ATX-P-561	HCDR2	RTYYRSKWYNGYAVSMKS
115	ATX-P-562	HCDR2	RTFYRSRWSAAYAASVSS
116	ATX-P-566	HCDR3	DLGELLDWYFDL
117	ATX-P-594	HCDR3	DRGDLLHWYFDL
118	ATX-P-604	HCDR3	DRGELLHWYFDL
119	ATX-P-595	HCDR3	EPGIVAPGPFDY
120	ATX-P-610	HCDR3	EPGIAAPGPFDY
121	ATX-P-572	HCDR3	EGGIVGATPFDY
122	ATX-P-587	HCDR3	DGDYYLPSPFDL
123	ATX-P-592	HCDR3	DSGIVETTPFDY
124	ATX-P-560	HCDR3	DNWNNGGPGFDP
125	ATX-P-581	HCDR3	EGGYIYGLDQ
126	ATX-P-573	HCDR3	EGGYTYGYDY
127	ATX-P-561	HCDR3	EGVGATTGFDY
128	ATX-P-562	HCDR3	EGVGSSTGFDY
VL Family: IGKV1			
129	-	LCDR1 Consensus	$RX_1SX_2X_3X_4X_5X_6X_7LX_8$ (X_1 is A or T; X_2 is Q or K; X_3 is G, S, D, or N; X_4 is I, F, or V; X_5 is T, R, A, S, N, G, or I; X_6 is T, N, G, S, I, K, or Y; X_7 is W, D, or Y; X_8 is A, T, G, N, or D)
130	ATX-P-574	LCDR1	RASQGITTWLA
131	ATX-P-576	LCDR1	RTSQGIRNWLA
132	ATX-P-563	LCDR1	RASQSFAGWLA
133	ATX-P-610	LCDR1	RASQGISSWLA
134	ATX-P-560	LCDR1	RASQGISSWLA
135	ATX-P-581	LCDR1	RASQGVNNWLA
136	ATX-P-573	LCDR1	RASQGISSWLA

137	ATX-P-561	LCDR1	RASQGISSWLT
138	ATX-P-562	LCDR1	RASKGISIWLA
139	ATX-P-580	LCDR1	RASQGIRNDLG
140	ATX-P-579	LCDR1	RASQGIRKDLG
141	ATX-P-577	LCDR1	RASQDIRNDLG
142	ATX-P-591	LCDR1	RASQSINTYLN
143	ATX-P-583	LCDR1	RASQNIGSYLN
144	ATX-P-601	LCDR1	RASQSINYLN
145	ATX-P-607	LCDR1	RASQSIRSYLN
146	ATX-P-597	LCDR1	RASQSISSYLD
147	ATX-P-582	LCDR1	RASQNINNYLN
148	ATX-P-571	LCDR1	RASQSISSYLN
149	ATX-P-568	LCDR1	RASQSISTWLA
150	ATX-P-578	LCDR1	RASQSVNSWLA
151	ATX-P-569	LCDR1	RASQNIITWLA
152	-	LCDR2 Consensus	$X_1X_2SX_3LX_4X_5$ (X_1 is G, A, T, or K; X_2 is A or T; X_3 is S, T, G, or N; X_4 is E, Q, or L; X_5 is S, T, or G)
153	ATX-P-574	LCDR2	GASSLES
154	ATX-P-576	LCDR2	AASSLQT
155	ATX-P-563	LCDR2	AASTLQS
156	ATX-P-610	LCDR2	AASSLQS
157	ATX-P-560	LCDR2	AASSLQS
158	ATX-P-581	LCDR2	AASSLLS
159	ATX-P-573	LCDR2	AASSLQS
160	ATX-P-561	LCDR2	AASSLQG
161	ATX-P-562	LCDR2	AASSLQS
162	ATX-P-580	LCDR2	AASSLQS
163	ATX-P-579	LCDR2	TASTLQS
164	ATX-P-577	LCDR2	AASSLQS
165	ATX-P-591	LCDR2	AASSLQS
166	ATX-P-583	LCDR2	ATSTLQS
167	ATX-P-601	LCDR2	AASSLQS
168	ATX-P-607	LCDR2	AASSLQS
169	ATX-P-597	LCDR2	AASSLQS
170	ATX-P-582	LCDR2	AASSLQS
171	ATX-P-571	LCDR2	AASSLQS
172	ATX-P-568	LCDR2	KASGLES
173	ATX-P-578	LCDR2	KASNLEG
174	ATX-P-569	LCDR2	KASSLES
175	ATX-P-574	LCDR3	QQANSFPWT
176	ATX-P-576	LCDR3	QQANSFPYT
177	ATX-P-563	LCDR3	QQANSFPLT
178	ATX-P-610	LCDR3	QQNYRTPIT
179	ATX-P-560	LCDR3	QQANSFPPT
180	ATX-P-581	LCDR3	QQANSFPIT
181	ATX-P-573	LCDR3	QQANSFPPT
182	ATX-P-561	LCDR3	QQANSFPPT
183	ATX-P-562	LCDR3	QQANSFPPT
184	ATX-P-580	LCDR3	LHFNSYPFT
185	ATX-P-579	LCDR3	LQYNNYPFT
186	ATX-P-577	LCDR3	LQYNNYPFT
187	ATX-P-591	LCDR3	QHSFTTPFT
188	ATX-P-583	LCDR3	QQSFIIPFT

189	ATX-P-601	LCDR3	QQSYSTPIT
190	ATX-P-607	LCDR3	QQSYRTPVT
191	ATX-P-597	LCDR3	QQSYSTPLT
192	ATX-P-582	LCDR3	QQSYSTPLT
193	ATX-P-571	LCDR3	QETYSVPLT
194	ATX-P-568	LCDR3	QQYNSFSLI
195	ATX-P-578	LCDR3	QQYDTSWT
196	ATX-P-569	LCDR3	QQYSSYSYT
VL Family: IGKV2			
197	-	LCDR1 Consensus	RSSQX$_1$LLHSX$_2$GYNX$_3$LD (X$_1$ is S or R; X$_2$ is T or S; X$_3$ is F or Y)
198	ATX-P-564	LCDR1	RSSQS LLHST GYNFLD
199	ATX-P-565	LCDR1	RSSQR LLHSS GYNYLD
200	-	LCDR2 Consensus	LX$_1$SX$_2$RAS (X$_1$ is A or G; X$_2$ is N or S)
201	ATX-P-564	LCDR2	LASNRAS
202	ATX-P-565	LCDR2	LGSSRAS
203	-	LCDR3 Consensus	MQX$_1$LQTPX$_2$T (X$_1$ is A or G; X$_2$ is Y or P)
204	ATX-P-564	LCDR3	MQALQTPYT
205	ATX-P-565	LCDR3	MQGLQTPPT
VL Family: IGKV3			
206	-	LCDR1 Consensus	RASQX$_1$X$_2$X$_3$X$_4$X$_5$X$_6$X$_7$X$_8$A (X$_1$ is S, N, or T; X$_2$ is V or I; X$_3$ is S or R; X$_4$ is S, G or N; X$_5$ is N or S; X$_6$ is L or Y; X$_7$ is A, L, or V)
207	ATX-P-608	LCDR1	RASQSVSSNLA
208	ATX-P-609	LCDR1	RASQSVSSNLA
209	ATX-P-602	LCDR1	RASQSVSSSYLA
210	ATX-P-588	LCDR1	RASQSVSSNLA
211	ATX-P-600	LCDR1	RASQNVRGSYLA
212	ATX-P-603	LCDR1	RASQSVSSSYLA
213	ATX-P-566	LCDR1	RASQSVRNSYVA
214	ATX-P-594	LCDR1	RASQSVSSSYLA
215	ATX-P-604	LCDR1	RASQTIRSSYLA
216	-	LCDR2 Consensus	GASX$_1$RAT (X$_1$ is T, S, or N)
217	ATX-P-608	LCDR2	GASTRAT
218	ATX-P-609	LCDR2	GASTRAT
219	ATX-P-602	LCDR2	GASSRAT
220	ATX-P-588	LCDR2	GASSRAT
221	ATX-P-600	LCDR2	GASNRAT
222	ATX-P-603	LCDR2	GASSRAT
223	ATX-P-566	LCDR2	GASSRAT
224	ATX-P-594	LCDR2	GASSRAT
225	ATX-P-604	LCDR2	GASSRAT
226	-	LCDR3 Consensus	QX$_1$YX$_2$X$_3$X$_4$X$_5$X$_6$T (X$_1$ is Q or H; X$_2$ is D or G; X$_3$ is N, S, or R; X$_4$ is W or S; X$_5$ is R, P, F, Y, V, or I; X$_6$ is T, W, L or I)
227	ATX-P-608	LCDR3	QQYD NWRT
228	ATX-P-609	LCDR3	QQYD NWRT
229	ATX-P-602	LCDR3	QQYG SSPWT
230	ATX-P-588	LCDR3	QQYG SSFT
231	ATX-P-600	LCDR3	QQYG SSYT
232	ATX-P-603	LCDR3	QHYG NSPLT

233	ATX-P-566	LCDR3	QQYG NSPLT
234	ATX-P-594	LCDR3	QQYG RSVT
235	ATX-P-604	LCDR3	QQYG RSII
VL Family: IGKV4			
236	-	LCDR1 Consensus	KSSQSVLYSSNNKNYLA
237	ATX-P-596	LCDR1	KSSQSVLYSSNNKNYLA
238	ATX-P-598	LCDR1	KSSQSVLYSSNNKNYLA
239	ATX-P-570	LCDR1	KSSQSVLYSSNNKNYLA
240	ATX-P-595	LCDR1	KSSQSVLYSSNNKNYLA
241	ATX-P-572	LCDR1	KSSQSVLYSSNNKNYLA
242	ATX-P-587	LCDR1	KSSQSVLYSSNNKNYLA
243	ATX-P-592	LCDR1	KSSQSVLYSSNNKNYLA
244	-	LCDR2 Consensus	WASX$_1$RES (X_1 is T, P or N)
245	ATX-P-596	LCDR2	WASTRES
246	ATX-P-598	LCDR2	WASTRES
247	ATX-P-570	LCDR2	WASTRES
248	ATX-P-595	LCDR2	WASTRES
249	ATX-P-572	LCDR2	WASPRES
250	ATX-P-587	LCDR2	WASTRES
251	ATX-P-592	LCDR2	WASNRES
252	-	LCDR3 Consensus	QQX$_1$X$_2$X$_3$X$_4$PX$_5$X$_6$T (X_1 is Y or F; X_2 is G or Y; X_3 is S or N; X_4 is S, T, or I; X_5 is M, Y, or R; X_6 is Y or T)
253	ATX-P-596	LCDR3	QQYGSSPMYT
254	ATX-P-598	LCDR3	QQFYNTPYT
255	ATX-P-570	LCDR3	QQYYSSPRT
256	ATX-P-595	LCDR3	QQYYSTPYT
257	ATX-P-572	LCDR3	QQYYSIPRT
258	ATX-P-587	LCDR3	QQYYSTPYT
259	ATX-P-592	LCDR3	QQYYSTPYT

[00209] Table 4: Anti-CFHR4 antibodies (VH and VL sequences)

SEQ ID NO:	**Antibody Name:**	**Descriptor:**	**Sequence:**
260	ATX-P-583	VH	QVQLVQSGAEVKKPGASVKVSCKASGYTFTTYGISWVRQAPGQ GLEWMGWISAYSGNTHYAQSLQDRVTMTTDTSTSTAYMEVRSL RSDDTAVYYCAKDEGYCSSTGCLNLFDPWGQGTLVTVSS
261	ATX-P-591	VH	QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQ GLEWMGWISAYNGNTNYAQKLQGRVTMTTDTSTSTAYMELRSL RSDDTAIYYCTRDLRGTAFDYWGQGTPVTVSS
262	ATX-P-602	VH	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPG QGLEWMGWINPNSGGTNYAKKFQGRVTMTRDTSISTAYMELSR LRSDDTAVYYCARGDTIFRLVTPLDYWGQGTLVTVSS
263	ATX-P-597	VH	QVQLVQSGAEVKKPGASVKVSCKASGYTFTNYYMQWVRQAPG QGLEWLGIIDPSGGSTTYAQKFQGRVTMTRDTSTSTVHMELRSLR SEDTAVYYCARDEGTDRPGWGYWGQGTLVTVSS
264	ATX-P-601	VH	QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPG QGLEWMGIINPSGGSTNYAQKFQGRLTMTRDTSTNTVYMELSSL RSEDTAVYYCATDQSGGMDVWGKGTTVTVSS
265	ATX-P-607	VH	QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPG QGLEWMGIINPSGGSTSYAQKFQGRVTMTRDTSTNTVYMELSSL RSEDTAVYYCARDPEYSSAFDIWGQGTMVTVSS

266	ATX-P-583	VH – nucleotide	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCT TTACCACCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAGCGCTTACAGTGGTAA CACACACTATGCACAGAGCCTCCAGGACAGAGTCACCATGAC CACAGACACATCCACGAGTACAGCCTACATGGAGGTGAGGAG CCTGAGATCTGACGACACGGCCGTGTATTACTGTGCGAAAGAT GAGGGATATTGTAGTAGTACCGGCTGCTTAAACTTGTTCGACC CCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA
267	ATX-P-591	VH – nucleotide	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCT TTACCAGCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAGCGCTTACAATGGTAA CACAAACTATGCACAGAAGCTCCAGGGCAGAGTCACCATGAC CACAGACACATCCACGAGCACAGCCTACATGGAGCTGAGGAG CCTGAGATCTGACGACACTGCCATTTATTACTGTACGAGAGAT CTACGTGGAACTGCCTTTGACTACTGGGGCCAGGGAACCCCGG TCACTGTCTCCTCA
268	ATX-P-602	VH – nucleotide	CAGGTGCAGCTGGTGCAATCTGGGGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCT TCACCGGCTACTATATGCACTGGGTGCGACAGGCCCCTGGACA AGGACTTGAGTGGATGGGATGGATCAACCCTAACAGTGGTGG CACAAACTATGCAAAGAAGTTTCAGGGCAGGGTCACCATGAC CAGGGACACGTCCATCAGCACAGCCTACATGGAGTTGAGCAG GCTGAGATCTGACGACACGGCCGTGTATTACTGTGCGAGAGG GGATACGATTTTTCGACTGGTTACCCCTCTTGACTACTGGGGC CAGGGAACCCTGGTCACCGTCTCCTCA
269	ATX-P-597	VH – nucleotide	CAGGTGCAGCTGGTGCAATCTGGAGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTTTCCTGCAAGGCATCTGGATACACCT TCACCAACTACTATATGCAGTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGCTGGGAATAATCGACCCTAGTGGTGGTAG CACAACCTATGCACAGAAGTTCCAGGGCAGAGTCACCATGAC CAGGGACACGTCCACGAGCACAGTCCACATGGAGCTGAGAAG TCTGAGATCTGAGGACACGGCCGTCTATTATTGCGCGAGAGAT GAGGGAACAGATCGTCCCGGGTGGGGCTACTGGGGCCAGGGA ACCCTGGTCACTGTCTCCTCA
270	ATX-P-601	VH – nucleotide	CAGGTGCAGCTGGTGCAATCTGGGGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTTTCCTGCAAGGCATCTGGATACACCT TCACCAGCTACTATATGCACTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGAATAATCAACCCTAGTGGTGGTAG CACAAACTACGCACAGAAGTTCCAGGGCAGACTCACCATGAC CAGGGACACGTCCACGAACACAGTCTACATGGAACTGAGTAG CCTGAGATCTGAGGACACGGCCGTGTATTACTGTGCGACAGAT CAAAGTGGGGGGATGGACGTCTGGGGCAAAGGGACCACGGTC ACCGTCTCCTCA
271	ATX-P-607	VH – nucleotide	CAGGTGCAGCTGGTGCAATCTGGGGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTTTCCTGCAAGGCATCTGGATACACCT TCACCAGTTACTATATGCACTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGAATAATCAACCCTAGTGGTGGTAG CACAAGCTACGCACAGAAGTTCCAGGGCAGAGTCACCATGAC CAGGGACACGTCAACGAACACAGTCTACATGGAGCTGAGCAG CCTTCGATCTGAGGACACGGCCGTGTATTACTGTGCGAGAGAT CCCGAGTATAGCAGTGCTTTTGATATCTGGGGACAAGGGACAA TGGTCACCGTCTCCTCA

272	ATX-P-583	VL	DIQMTQSPSSLSASVGDRVTITCRASQNIGSYLNWYQQKPGNAPK LLIYATSTLQSGVPSRFSGSGSGTDFTLIISSLHPEDFTVYYCQQSFI IPFTFGPGTKVDIK
273	ATX-P-591	VL	DIQMTQSPSSLSASVGDRVTITCRASQSINTYLNWYQQKPGKAPK LLIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYSCQHSF TTPFTFGPGTKLEIK
274	ATX-P-602	VL	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQAP RLLIYGASSRATGIPDRFSGSGSGTQFTLTISSLQSEDFAVYYCQQ YGSSPWTFGQGTKVDIK
275	ATX-P-597	VL	DIQMTQSPSSLSASIGDRVTITCRASQSISSYLDWYQRKSGKAPKL LIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYS TPLTFGGGTKVDIK
276	ATX-P-601	VL	DIQMTQSPSSLSASVGDRVTITCRASQSINIYLNWYQQKPEKDPKL LIYAASSLQSGVPSRFSGSGSGTDFTLTISNLQPEDFATYYCQQSY STPITFGQGTRLEIK
277	ATX-P-607	VL	DIQMTQSPSSLSASVGDRGTITCRASQSIRSYLNWYQQKPGKAPK LLIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSY RTPVTFGPGTKVDIK
278	ATX-P-583	VL – nucleotide	GACATCCAGATGACCCAGTCTCCGTCCTCCCTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAACAT TGGCAGTTATTTAAATTGGTATCAGCAGAAACCAGGGAATGCC CCTAAACTCCTGATCTATGCTACATCCACTTTGCAAAGTGGGG TCCCATCAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCAC TCTCATCATCAGCAGTCTGCACCCTGAAGATTTTACAGTTTATT ACTGTCAACAGAGTTTCATTATCCCATTCACTTTCGGCCCTGGG ACCAAAGTGGATATCAAA
279	ATX-P-591	VL – nucleotide	GACATCCAGATGACTCAGTCTCCATCCTCCCTGTCTGCATCTGT TGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCAT TAACACCTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGG GTCCCATCAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCA CTCTCACCATCAGCAGTCTGCAACCTGAAGATTTTGCAACTTA CTCCTGTCAACATAGTTTCACTACCCCATTCACTTTCGGCCCTG GGACCAAGCTGGAAATCAAA
280	ATX-P-602	VL – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCC AGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGT TAGCAGCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCA GGCTCCCAGGCTCCTCATCTATGGTGCATCCAGTAGGGCCACT GGCATCCCAGACAGGTTCAGTGGCAGTGGGTCTGGGACACAG TTCACTCTCACCATCAGCAGCCTGCAGTCTGAAGATTTTGCAG TTTATTACTGTCAGCAGTATGGTAGCTCACCGTGGACGTTCGG CCAAGGGACCAAAGTGGATATCAAA
281	ATX-P-597	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTAT TGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCAT TAGCAGCTATTTAGATTGGTATCAGCGGAAATCAGGGAAAGC CCCTAAACTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGG GTCCCATCAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCA CTCTCACCATCAGCAGTCTGCAACCTGAAGATTTTGCAACTTA CTACTGTCAACAGAGTTACAGTACCCCGCTCACTTTCGGCGGA GGGACCAAAGTGGATATCAAA
282	ATX-P-601	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCAT TAATATCTATTTAAATTGGTATCAGCAGAAACCAGAGAAAGAC CCTAAGCTCCTGATCTATGCTGCGTCCAGTTTGCAAAGTGGGG TCCCATCAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCAC

			TCTCACCATCAGCAATCTGCAACCTGAAGATTTTGCAACTTAC TACTGTCAACAGAGTTACAGTACCCCGATCACCTTCGGCCAAG GGACACGACTGGAGATTAAA
283	ATX-P-607	VL – nucleotide	GACATCCAGATGACACAGTCTCCATCCTCCCTGTCTGCATCTG TAGGAGACAGAGGCACCATCACTTGCCGGGCAAGTCAGAGCA TTAGAAGTTATTTAAATTGGTATCAGCAGAAACCAGGGAAAG CCCCTAAACTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGG GGTCCCATCAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTC ACTCTCACCATCAGCAGTCTGCAACCTGAAGATTTTGCAACTT ACTACTGTCAACAGAGTTACAGAACCCCAGTCACTTTCGGCCC TGGGACCAAAGTGGATATCAAA
284	ATX-P-564	VH	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPGKG LEWVSSISSSSSYTYYADSVRGRFTISRDNAKNSLYLQMSSLRAE DTAVYYCARSASIAAGMDVWGKGTTVTVSS
285	ATX-P-568	VH	EVQLVESGGGLVQPGGSLRLSCAASGFPFSSYVMSWVRQAPGKG LEWVSVISVSGGSTFYADSVRGRFTISRDNSKNTLYLQVYSLRAE DTAVYYCAKDGLAVAGFDHWGQGTLVTVSS
286	ATX-P-574	VH	EVQLVESGGGLVQRGGSLRLSCVASGFTFSSYAMSWVRQAPGKG LEWVSVISGSGGTTYYADSVKGRFTISRDDSKKTLYLQMNSLRAE DTAVYYCAKRGDYGDYMDVWGKGTTVTVSS
287	ATX-P-565	VH	QVQLVESGGGVVQPGRSLRLSCAASGFTFNTYGIHWVRQAPGKG LEWVAVIWHDGSSKNYVDSVTGRFTISRDNSKNTVYLQMNSLRA EDTAVYYCARRGNWNYGFYYYYMDVWGKGTTVTVSS
288	ATX-P-578	VH	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYSMNWVRQAPGKG LEWVSYISSSSSTIFHADSVKGRFTISRDNAKNSLYLQMNSLRDED TAVYYCARGNWNYYYMDVWGKGTTVTVSS
289	ATX-P-569	VH	EVQLVESGGGLAQFGRSLRLSCAASGFTFDDYAMHWLRQAPGM GLEWVSGISWNSGSIGYADSVKGRFTIARDNAKNSVHLQMNSLR AEDTALYYCAKDIGNGYTKGDVFDIWGQGTMVTVSS
290	ATX-P-576	VH	EVQLVESGGGLVQPGRSLRLSCTASGFTFDDYEMHWVRQAPGK GLEWVSDISRNSGRIGYADSVKGRFTISRDNAKNSLYLQMNSLRA EDTALYYCAKDIWGSGYFDYWGQGILVTVSS
291	ATX-P-588	VH	EVQLVESGGGLVQPGRSLRLSCAASGFTFEDYAMHWVRQAPGK GLEWVSGISWNSGSIGYADSVKGRFTISRDNAKKSLYLQMNSLR AEDTALYYCTKDRDDGYNYAGVFDYWGQGTLVTVSS
292	ATX-P-596	VH	EVQLVESGGGLVQPGRSLRLSCAASGFSFDDYAMHWVRQVPGK GLEWVSGISWTGGSVGYADPVKGRFTISRDNAKNSLYLQMNSLR PEDTALYYCAKDMGDGYSRNWPFDYWGQGTLVTVSS
293	ATX-P-600	VH	EVQLVESGGGLVQPGRSLRLSCAASGFTFDDYAMHWVRQVPGR GLEWVSGISWSGGSIGYADSVKGRFTISRDNSKNSLYLQMNSLRA EDTALYYCTKDREDGYNYGGVFDYWGQGTLVTVSS
294	ATX-P-564	VH – nucleotide	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCCTGGTCAAGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTAGCTATACCATGAACTGGGTCCGCCAGGCTCCAGGGAA GGGGCTGGAGTGGGTGTCATCCATTAGTAGTAGTAGTAGTTAC ACATACTACGCAGACTCAGTGAGGGGCCGATTCACCATCTCCA GAGACAACGCCAAGAACTCACTGTATCTGCAAATGAGCAGCC TGAGAGCCGAGGACACAGCTGTGTATTACTGTGCGAGATCGG CGAGTATAGCAGCTGGGATGGACGTCTGGGGCAAAGGGACCA CGGTCACCGTCTCCTCA
295	ATX-P-568	VH – nucleotide	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCG GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCCCCT TTAGCAGCTATGTCATGAGCTGGGTCCGCCAGGCTCCAGGGAA GGGGCTGGAGTGGGTCTCAGTTATAAGTGTTAGTGGTGGTAGT ACATTCTACGCAGACTCCGTGAGGGGCCGGTTCACCATCTCCA

			GAGACAATTCCAAGAACACGCTGTATCTGCAAGTGTACAGCCT GCGAGCCGAGGACACGGCCGTATATTACTGTGCGAAAGATGG TTTGGCAGTGGCTGGTTTTGACCACTGGGGCCAGGGAACCCTG GTCACCGTCTCCTCA
296	ATX-P-574	VH – nucleotide	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCGG GGGGGGTCCCTGAGACTCTCCTGTGTAGCCTCTGGATTCACCT TTAGTAGCTATGCCATGAGCTGGGTCCGCCAGGCTCCAGGGAA GGGGCTGGAGTGGGTCTCAGTTATTAGTGGTAGTGGTGGTACC ACATACTACGCAGACTCCGTGAAGGGCCGGTTCACCATCTCCA GAGACGATTCCAAGAAGACACTGTATCTGCAAATGAACAGCC TGAGAGCCGAGGACACGGCCGTATATTATTGTGCGAAAAGGG GTGACTACGGGGACTACATGGACGTCTGGGGCAAAGGGACCA CGGTCACCGTCTCCTCA
297	ATX-P-565	VH – nucleotide	CAGGTGCAGCTGGTGGAGTCTGGGGGAGGCGTGGTCCAGCCT GGGAGGTCCCTGAGACTCTCCTGTGCAGCGTCTGGATTCACCT TCAATACCTATGGCATCCACTGGGTCCGCCAGGCTCCAGGCAA GGGACTGGAGTGGGTGGCAGTTATATGGCATGATGGAAGTAG TAAAAACTATGTAGACTCCGTGACGGGCCGATTCACCATCTCC AGAGACAATTCCAAGAACACGGTGTATCTGCAAATGAACAGC CTGAGAGCCGAGGACACGGCTGTTTATTACTGTGCGAGAAGG GGTAACTGGAACTACGGCTTCTACTACTACTACATGGACGTCT GGGGCAAAGGAACCACGGTCACCGTCTCCTCA
298	ATX-P-578	VH – nucleotide	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGTTTGGTACAGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTAGATATAGCATGAACTGGGTCCGCCAGGCTCCAGGGA AGGGGCTGGAGTGGGTTTCATACATTAGTAGTAGTAGTAGTAC CATTTTCCATGCAGACTCTGTGAAGGGCCGATTCACCATCTCC AGAGACAATGCCAAGAACTCACTGTACCTGCAAATGAACAGC CTGAGAGACGAGGACACGGCTGTGTATTACTGTGCGAGAGGG AACTGGAACTACTACTACATGGACGTCTGGGGCAAAGGGACC ACGGTCACCGTCTCCTCA
299	ATX-P-569	VH – nucleotide	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGCACAGTTT GGCAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TTGATGATTATGCCATGCACTGGCTCCGGCAAGCTCCAGGGAT GGGCCTGGAGTGGGTCTCAGGTATTAGTTGGAATAGCGGGAG CATAGGCTATGCGGACTCTGTGAAGGGCCGATTCACCATCGCC AGAGACAACGCCAAGAACTCCGTGCATCTGCAAATGAACAGT CTGAGAGCTGAGGACACGGCCTTGTATTACTGTGCAAAAGATA TAGGAAATGGATATACGAAGGGTGATGTTTTTGATATCTGGGG ACAAGGGACAATGGTCACCGTCTCTTCA
300	ATX-P-576	VH – nucleotide	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCT GGCAGGTCCCTGAGACTCTCCTGTACAGCCTCTGGATTCACAT TTGATGATTATGAAATGCACTGGGTCCGGCAAGCTCCAGGGAA GGGCCTGGAGTGGGTCTCAGATATTAGTCGGAACAGTGGTAG AATAGGCTATGCGGACTCTGTGAAGGGCCGATTCACCATTTCC AGAGACAACGCCAAGAACTCCCTGTATCTACAAATGAACAGT CTGAGAGCTGAGGACACGGCCTTGTATTACTGTGCAAAAGATA TTTGGGGATCGGGGTACTTTGACTATTGGGGCCAGGGAATCCT GGTCACCGTCTCCTCA
301	ATX-P-588	VH – nucleotide	GAAGTGCAGCTGGTGGAGTCCGGGGGAGGCTTGGTACAACCT GGCAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TTGAAGATTATGCCATGCACTGGGTCCGGCAAGCTCCAGGGAA GGGCCTGGAGTGGGTCTCAGGTATTAGTTGGAATAGTGGTAGC ATAGGCTATGCGGACTCTGTGAAGGGCCGATTCACCATCTCCA GAGACAACGCCAAGAAATCCCTGTATCTGCAAATGAACAGTC TGAGAGCTGAGGACACGGCCTTATATTACTGTACAAAAGATA

			GAGATGATGGCTACAACTATGCGGGGGTCTTTGACTACTGGGG CCAGGGAACCCTGGTCACTGTCTCCTCA
302	ATX-P-596	VH – nucleotide	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCT GGCAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGGTTCAGTT TTGATGATTATGCCATGCACTGGGTCCGGCAAGTTCCAGGGAA GGGCCTGGAATGGGTCTCAGGTATTAGTTGGACTGGTGGTAGC GTAGGCTATGCGGACCCCGTGAAGGGCCGATTCACCATCTCCA GAGACAACGCCAAGAACTCCCTGTATCTGCAAATGAACAGTCT GAGACCTGAGGACACGGCCTTGTATTACTGTGCAAAAGATATG GGAGACGGGTATAGCAGAAACTGGCCCTTTGACTACTGGGGC CAGGGAACCCTGGTCACCGTCTCCTCA
303	ATX-P-600	VH – nucleotide	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCT GGCAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TTGATGATTATGCCATGCACTGGGTCCGGCAAGTTCCAGGGAG GGGCCTGGAGTGGGTCTCAGGTATTAGTTGGAGTGGTGGCAGC ATAGGCTATGCGGACTCTGTGAAGGGCCGATTCACCATCTCCA GAGACAACTCCAAGAACTCCCTGTATCTGCAAATGAACAGTCT GAGAGCTGAGGACACGGCCTTGTATTACTGTACAAAAGATAG AGAAGATGGATACAACTATGGGGGGGTCTTTGACTACTGGGG CCAGGGAACCCTGGTCACCGTCTCCTCA
304	ATX-P-564	VL	DIVMTQSPLSLPVTPGEPASISCRSSQSLLHSTGYNFLDWYLQKPG LSPQLLIYLASNRASGVPDRFSGSGSGTDFTLKISRVEAEDVGVYY CMQALQTPYTFGQGTKLEIK
305	ATX-P-568	VL	DIQMTQSPSTLSASVGDRVTITCRASQSISTWLAWYQQKPGKAPK LLIHKASGLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQY NSFSLIFGGGTRVEIK
306	ATX-P-574	VL	DIQMTQSPSSVSASVGDRVTITCRASQGITTWLAWYQQKPGKAP KLLIFGASSLESGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQA NSFPWTFGQGTKVEIK
307	ATX-P-565	VL	DIVMTQSPLSLPVTPGEPASISCRSSQRLLHSSGYNYLDWYLQKPG QSPQLLIYLGSSRASGVPDRFSGSGSGTDFTLKISRVEAEDVGVYY CMQGLQTPPTFGQGTKVEIK
308	ATX-P-578	VL	DIQMTQSPSTLSASVGDRVTISCRASQSVNSWLAWYQQKPGKAP KLLIYKASNLEGGVPSSFSGSGSGTEFTLTISSLQPDDFATYYCQQ YDTSWTFGQGTKVEIK
309	ATX-P-569	VL	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPN LLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYS SYSYTFGQGTKLEIK
310	ATX-P-576	VL	DIQMTQSPSSVSASVGDRVTITCRTSQGIRNWLAWYQQKPGKAP KLLIYAASSLQTGGPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQ ANSFPYTFGQGTKLEIK
311	ATX-P-588	VL	EIVLTQSPATLSVSPGERATLSCRASQSVSSNLAWYQQKPGQAPR LLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQQY GSSFTFGPGTKVDIK
312	ATX-P-596	VL	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQ KPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVA VYYCQQYGSSPMYTFGQGTKLEIK
313	ATX-P-600	VL	EIVLTQSPGTLSLSPGERATLSCRASQNVRGSYLAWYQQKPGQAP RLLIYGASNRATDIPDRFSGSGSGTDFTLTISGLEPEDFVVYYCQQ YGSSYTFGQGTKVEIK
314	ATX-P-564	VL – nucleotide	GATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCC TGGAGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGAGCCTC CTGCATAGTACTGGATACAACTTTTTGGATTGGTACCTGCAGA AGCCAGGGCTGTCTCCACAGCTCCTGATCTATTTGGCTTCTAAT CGGGCCTCCGGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAG

			GCACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGG ATGTTGGGGTTTATTACTGCATGCAAGCTCTACAAACTCCGTA CACTTTTGGCCAGGGGACCAAGCTGGAGATCAAA
315	ATX-P-568	VL – nucleotide	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCCTCTGT AGGAGACAGAGTCACCATCACTTGCCGGGCCAGCCAGAGTAT TAGTACCTGGTTGGCCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGCTCCTGATCCATAAGGCGTCTGGTTTAGAAAGTGGG GTCCCATCAAGATTCAGCGGCAGTGGATCTGGGACAGAATTCA CTCTCACCATCAGCAGCCTGCAGCCTGATGATTTTGCAACTTA TTACTGCCAACAGTATAATAGTTTTTCTCTCATTTTCGGCGGAG GGACCAGGGTGGAGATCAAA
316	ATX-P-574	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTAT TACCACCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGCTCCTGATCTTTGGTGCATCTAGTTTGGAAAGTGGG GTCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCA CTCTCACCATCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTA CTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTCGGCCAA GGGACCAAGGTGGAAATCAAA
317	ATX-P-565	VL – nucleotide	GATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCC TGGAGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGCGCCTC CTGCATAGTAGTGGATACAATTATTTGGATTGGTATCTGCAGA AGCCAGGACAGTCTCCACAGCTCCTGATCTATTTGGGTTCTAG TCGGGCCTCCGGGGTCCCTGACAGGTTCAGTGGCAGTGGATCA GGCACAGATTTTACACTGAAAATCAGCAGGGTGGAGGCTGAG GATGTTGGGGTTTATTACTGCATGCAAGGTCTACAAACTCCTC CGACGTTCGGCCAAGGGACCAAGGTGGAAATCAAA
318	ATX-P-578	VL – nucleotide	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGT AGGAGACAGAGTCACCATCAGTTGCCGGGCCAGTCAGAGTGT TAATAGCTGGTTGGCCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAACTCCTGATCTATAAGGCGTCTAATTTAGAAGGTGGG GTCCCATCAAGTTTCAGCGGCAGTGGATCTGGGACAGAATTCA CTCTCACCATCAGCAGCCTGCAGCCTGATGATTTTGCAACTTA TTACTGCCAACAATATGATACTTCTTGGACGTTCGGCCAAGGG ACCAAGGTGGAGATCAAA
319	ATX-P-569	VL – nucleotide	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGT AGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATT ATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCC CTAACCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGT CCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACT CTCACCATCAGCAGCCTGCAGCCTGATGATTTTGCAACTTATT ACTGCCAACAGTATAGTAGTTATTCGTACACTTTTGGCCAGGG GACCAAGCTGGAGATCAAA
320	ATX-P-576	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGTCGGACGAGTCAGGGTAT TAGAAACTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAACTCCTGATCTATGCTGCATCCAGTTTGCAAACTGGG GGCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCA CTCTCACCATCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTA CTATTGTCAACAGGCTAACAGTTTCCCGTACACTTTTGGCCAG GGGACCAAGCTGGAGATCAAA
321	ATX-P-588	VL – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGCCACCCTGTCTGTGTCTC CAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTG TTAGCAGCAACTTAGCCTGGTACCAGCAGAAACCTGGCCAGG CTCCCAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGG

			CATCCCAGACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTC ACTCTCACCATCAGCAGACTGGAGCCTGAAGATTTTGCAGTGT ATTACTGTCAGCAGTATGGTAGCTCATTCACTTTCGGCCCTGG GACCAAAGTGGATATCAAA
322	ATX-P-596	VL – nucleotide	GACATCGTGATGACTCAGTCTCCAGACTCCCTGGCTGTGTCTC TGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTG TTTTATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCA GCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCA TCTACCCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCG GGTCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGC TGAAGATGTGGCAGTTTATTACTGTCAGCAGTATGGTAGCTCA CCCATGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAA
323	ATX-P-600	VL – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCC AGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAATGT TAGGGGCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCA GGCTCCCAGGCTCCTCATATATGGTGCATCCAACAGGGCCACT GACATCCCAGACAGGTTCAGTGGCAGTGGGTCTGGGACAGAC TTCACTCTCACCATCAGCGGCCTGGAGCCTGAAGATTTTGTAG TGTATTACTGTCAGCAGTATGGTAGTTCGTACACTTTTGGCCA GGGGACCAAGGTGGAGATCAAA
324	ATX-P-571	VH	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSRNWWSWVRQPPGK GLEWIGEIYHGGTTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAA DTAVYYCARGGLRLGELSPNAFDIWGQGTMVTVSS
325	ATX-P-577	VH	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSNWWTWVRQPPGK GLEWIGETYHDGSTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAA DTAVYYCLEFYFDYWGQGTLVTVSS
326	ATX-P-579	VH	QVQLQESGPGLVKPSGTLSLTCAVSGASISTSNWWTWVRQPPGK GLEWIGEIYHDGSTNYSPSLQSRVTISVDKSKNQFSLTLTSVTAAD TAIYYCGDFYIDVWGNGTTVTVSS
327	ATX-P-580	VH	QVQLQESGPGLVKPSGTLSLTCAVSGGSISTSDWWTWVRQPPGK GLEWIGEIYHSGSTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAAD TAVYYCADWYFDLWGRGTLVTVSS
328	ATX-P-582	VH	QVQLQESGPGLVKPSGTLSLTCAVSGGSISISKWWSWVRQPPGKG LEWIGEIYHTGSTNYHPSLKSRVTISVDKSKNQFYLKLNSVTAAD TAVYYCARDELRLGELSPSLDIWGQGTMVTVSS
329	ATX-P-598	VH	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSNWWSWVRQSPGK GLEWIGEIYHSGTTNYNPSLKSRVTISVDKSKNQFSLKLSSATAAD TAVYYCARDRLRLGESSSDVFDIWGQGTMVTVSS
330	ATX-P-603	VH	QVQLQESGPGLVKPSGTLSLTCAVSGGSISGSHWWSWFRQPPGK GLEWIGEIYHTGSTNKNPSLKSRVTISLDKSKNQFSLRLRSVTDAD TAVYYCARDQYTGSPRDAFDIWGQGTMVTVSS
331	ATX-P-608	VH	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSNWWSWVRQSPGK GLEWIGEIYHTGSTNKKPSLKSRVIISVDKSKNQFSLKLISVNAAD TAIYYCARDREGGTTEAFDIWGQGTMVTVSS
332	ATX-P-609	VH	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSNWWSWVRQPPGK GLEWIGEIYHSGSTNYNPSLKSRVTISVDKSKNQFSLKLRSVTAAD TAVYYCARDQLSSGPTDAFDIWGQGTMVTVSS
333	ATX-P-563	VH	QVQLQESGPGLMKPSETLSLTCTVSGGSISSHYWSWIRQPPGKGL EWIGYIFYSGNINYNPSLKSRVTISVDTSKNQFSLKLRSVTTADTA VYYCARDRGGSYSYHFDCWGQGTLVTVSS
334	ATX-P-570	VH	QVQLQESGPGLVKPSETMSLTCTVSGGSFTGYYWSWIRQPPGKG LEWIGYVHYSGGTKSNPSLKSRVTISVDTSKNQFSLKLSSVTAAD TAVYYCARERYEWNSYFDYWGQGTLVTVSS
335	ATX-P-571	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGTGCTGTCTCGGGTGGCTCCA

			TCAGTAGTCGTAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGATTGGGGAAATCTATCATGGTGGGAC CACCAACTACAACCCGTCCCTTAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAATTCTCCCTGAAGCTGAGTTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGGG GATTACGTTTGGGGGAGTTATCGCCTAATGCTTTTGATATCTG GGGACAAGGGACAATGGTCACCGTCTCTTCA
336	ATX-P-577	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTAGTAACTGGTGGACTTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGATTGGGGAAACCTATCATGATGGGAG CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATTTCA GTAGACAAGTCCAAGAACCAATTCTCCCTGAAACTGAGTTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTTTGGAATTCTA CTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA
337	ATX-P-579	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTGTCTGGTGCCTCCAT CAGCACAAGTAATTGGTGGACTTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGATTGGTGAAATCTATCATGATGGGAG CACCAACTACAGCCCGTCCCTCCAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGACGCTGACCTCTG TGACCGCCGCGGACACGGCCATTTATTATTGTGGTGACTTCTA CATAGACGTCTGGGGCAACGGGACCACGGTCACCGTCTCCTCA
338	ATX-P-580	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCACTAGTGACTGGTGGACTTGGGTCCGCCAGCCCCCAGGG AAGGGGCTGGAGTGGATTGGGGAAATCTATCATAGTGGGAGC ACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAG TAGACAAATCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGT GACCGCCGCGGACACGGCCGTGTATTACTGTGCGGACTGGTAC TTCGATCTCTGGGGCCGTGGCACCCTGGTCACTGTCTCCTCA
339	ATX-P-582	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTGTCTGGTGGCTCCA TCAGCATTAGTAAATGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGACTGGAGTGGATTGGGGAAATCTATCATACTGGGAG CACCAACTACCACCCGTCCCTCAAGAGCCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAATTCTACCTGAAGCTGAACTCTG TGACCGCCGCGGACACGGCCGTATATTACTGTGCGAGAGATG AATTACGGTTGGGGGAGTTATCGCCCTCTCTTGATATCTGGGG ACAAGGGACAATGGTCACCGTCTCTTCA
340	ATX-P-598	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTAGTAACTGGTGGAGTTGGGTCCGCCAGTCCCCAGG GAAGGGGCTGGAATGGATTGGGGAAATCTATCATAGTGGGAC CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTG CGACCGCCGCGGACACGGCCGTGTATTATTGTGCGAGAGATA GATTACGTTTGGGGGAGTCATCGTCCGATGTTTTTGATATCTG GGGACAAGGGACAATGGTCACCGTCTCTTCA
341	ATX-P-603	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCGGTAGTCACTGGTGGAGTTGGTTCCGCCAGCCCCCAGGA AAGGGGCTGGAGTGGATTGGGGAAATCTATCATACTGGGAGC ACCAACAAAAACCCGTCCCTCAAGAGTCGAGTCACTATCTCAT TAGACAAGTCCAAGAATCAGTTCTCCCTGAGGCTGAGGTCTGT GACCGACGCGGACACGGCCGTGTATTACTGTGCGAGAGATCA

			GTATACTGGGAGCCCAAGGGATGCTTTTGATATCTGGGGACAA GGGACAATGGTCACCGTCTCCTCA
342	ATX-P-608	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTAGTAACTGGTGGAGTTGGGTCCGCCAGTCCCCAGG GAAGGGGCTGGAGTGGATTGGGGAAATCTATCATACTGGGAG CACCAACAAAAAACCGTCCCTCAAGAGTCGAGTCATCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAAACTGATCTCTG TGAACGCCGCGGACACGGCCATATATTACTGTGCGAGAGATC GGGAAGGGGGAACTACTGAAGCTTTTGATATCTGGGGACAAG GGACAATGGTCACCGTCTCTTCA
343	ATX-P-609	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTAGTAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGATTGGGGAAATCTATCATAGTGGGAG CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAGGTCTG TGACCGCCGCGGACACGGCCGTTTATTACTGTGCGAGAGATCA ACTAAGTAGCGGACCTACGGATGCTTTTGATATCTGGGGACAA GGGACAATGGTCACCGTCTCTTCA
344	ATX-P-563	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGATGAAGCCT TCGGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCAT CAGTAGTCACTACTGGAGCTGGATCCGGCAACCCCCAGGGAA GGGACTGGAGTGGATTGGATATATCTTTTACAGTGGGAACATA AATTACAACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTAG ACACGTCCAAGAACCAGTTCTCCCTGAAGCTGAGGTCTGTGAC CACTGCGGACACGGCCGTATATTACTGTGCGAGAGATCGAGGT GGGAGCTATTCGTACCACTTTGACTGCTGGGGCCAGGGAACCC TGGTCACCGTCTCCTCA
345	ATX-P-570	VH – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACTATGTCCCTCACCTGCACTGTCTCTGGTGGCTCCTT CACTGGATACTACTGGAGTTGGATCCGGCAGCCCCCAGGGAA GGGACTGGAGTGGATTGGATATGTCCATTACAGTGGGGGCAC CAAAAGCAACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTA GACACGTCCAAGAACCAGTTTTCCCTGAAGCTGAGCTCTGTGA CCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGAGAGGT ATGAGTGGAACTCCTACTTTGACTACTGGGGCCAGGGAACCCT GGTCACCGTCTCCTCA
346	ATX-P-571	VL	DIQMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPGKAPK VLIYAASSLQSGIPSRFSGSGSGTDFTLTISSLQPEDFATYYCQETY SVPLTFGGGTKVEIK
347	ATX-P-577	VL	DIQMTQSPSSLSASVGDRVTITCRASQDIRNDLGWYQQKPGKVPK RLIYAASSLQSGVPSRFSGSGSGTEFTLTISSLQPEDFASYYCLQYN NYPFTLGPGTKVDIK
348	ATX-P-579	VL	DIQMTQSPSSLSASVGDRVTITCRASQGIRKDLGWYQQKPGKAPK RLIYTASTLQSGVPSRFSGSGSGTEFTLTISSLQPEDFATYYCLQYN NYPFTFGPGTKVDIK
349	ATX-P-580	VL	DIQMTQSPSSLSASVGDRVTITCRASQGIRNDLGWYQQKPGKAPK RLIYAASSLQSGVPSRFSGSGSGTEFTLAISSLQPEDFATYYCLHFN SYPFTFGPGTKVDIK
350	ATX-P-582	VL	DIQMTQSPSSLSASVGDRVTITCRASQNINNYLNWFRQKPGKAPK LLIFAASSLQSGVPSRFSGSESGTDFTLTISSLQPEDFATYYCQQSY STPLTFGGGTKVEIK

351	ATX-P-598	VL	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQ KPGQPPELLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDMA VYYCQQFYNTPYTFGQGTKVDIK
352	ATX-P-603	VL	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQAP RLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQH YGNSPLTFGGGTKVEIK
353	ATX-P-608	VL	EIVMTQSPATLSVSPGERATLSCRASQSVSSNLAWYQQKPGQAPR LLIYGASTRATGIPVRFSGSGSGTQFTLTISSLQSEDFAVYYCQQY DNWRTFGQGTRLEIK
354	ATX-P-609	VL	EIVMTQSPATLSVSPGERATLSCRASQSVSSNLAWYQQKPGQAPR LLIYGASTRATGIPVRFSGSGSGTQFTLTISSLQSEDFAVYYCQQY DNWRTFGQGTKLEIK
355	ATX-P-563	VL	DIQMTQSPSSVSASVGDRVTITCRASQSFAGWLAWYQQKPGKAP KLLIYAASTLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQ ANSFPLTFGGGTKVEIK
356	ATX-P-570	VL	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYHQ KPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVA VYYCQQYYSSPRTFGQGTKVEIK
357	ATX-P-571	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGT GGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCAT TAGCAGCTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGGTCCTGATCTATGCTGCATCCAGTTTGCAGAGTGGG ATCCCATCACGGTTCAGTGGCAGTGGATCTGGGACAGATTTCA CTCTCACCATCAGCAGTCTGCAACCTGAAGATTTTGCAACTTA CTACTGTCAAGAGACTTACAGTGTTCCGCTCACTTTCGGCGGA GGGACCAAGGTGGAGATCAAA
358	ATX-P-577	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGGACAT TAGAAATGATTTAGGCTGGTATCAGCAGAAACCAGGGAAAGT CCCTAAGCGCCTGATCTATGCTGCATCTAGTTTGCAAAGTGGG GTCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCA CTCTCACAATCAGCAGCCTGCAGCCTGAAGATTTCGCAAGTTA TTACTGTCTACAGTATAATAATTATCCATTCACTCTCGGCCCTG GGACCAAAGTGGATATCAAA
359	ATX-P-579	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGGGCAT TAGAAAAGATTTAGGCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGCGCCTGATCTATACTGCATCCACTTTACAAAGTGGG GTCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCA CTCTCACAATCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTA TTACTGTCTACAGTATAATAATTACCCATTCACTTTCGGCCCTG GGACCAAAGTGGATATCAAA
360	ATX-P-580	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCTTCTGT CGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGGGCAT TAGAAATGATTTAGGCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGCGCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGG GTCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCA CTCTCGCAATCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTA TTACTGTCTACACTTTAATAGTTACCCATTCACTTTCGGCCCTG GGACCAAAGTGGATATCAAA
361	ATX-P-582	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAACAT TAACAACTATTTAAATTGGTTCCGGCAGAAACCAGGGAAAGC CCCTAAGCTCCTGATCTTTGCTGCATCCAGTTTACAAAGTGGG GTCCCATCAAGATTCAGTGGCAGTGAATCTGGGACAGATTTCA

			CTCTCACCATCAGCAGTCTGCAACCTGAGGATTTTGCGACTTA CTACTGTCAACAGAGTTACAGTACCCCTCTCACTTTCGGCGGA GGGACCAAGGTGGAGATCAAA
362	ATX-P-598	VL – nucleotide	GACATCGTGATGACTCAGTCTCCAGACTCCCTGGCTGTGTCTC TGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTG TTTTATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCA GCAGAAACCAGGACAGCCTCCTGAGCTGCTCATTTACTGGGCA TCTACCCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCG GGTCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGC TGAAGATATGGCAGTTTATTACTGTCAACAATTTTATAATACT CCGTACACTTTTGGCCAGGGGACCAAAGTGGATATCAAA
363	ATX-P-603	VL – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCC AGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGT TAGCAGCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCA GGCTCCCAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACT GGCATCCCAGACAGGTTCAGTGGCAGTGGGTCTGGGACAGAC TTCACTCTCACCATCAGCAGACTGGAGCCTGAAGATTTTGCAG TGTATTACTGTCAGCATTATGGTAACTCACCGCTCACTTTCGGC GGAGGGACCAAGGTGGAGATCAAA
364	ATX-P-608	VL – nucleotide	GAAATAGTGATGACGCAGTCTCCAGCCACCCTGTCTGTGTCTC CAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTG TTAGCAGCAACTTAGCCTGGTACCAGCAGAAACCTGGCCAGG CTCCCAGGCTCCTCATCTATGGTGCATCCACCAGGGCCACTGG TATCCCAGTCAGGTTCAGTGGCAGTGGGTCTGGGACACAGTTC ACTCTCACCATCAGCAGCCTGCAGTCTGAAGATTTTGCAGTTT ATTATTGTCAGCAATATGATAACTGGCGGACGTTCGGCCAAGG GACACGACTGGAGATTAAA
365	ATX-P-609	VL – nucleotide	GAAATAGTGATGACGCAGTCTCCAGCCACCCTGTCTGTGTCTC CAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTG TTAGCAGCAACTTAGCCTGGTACCAGCAGAAACCTGGCCAGG CTCCCAGGCTCCTCATCTATGGTGCATCCACCAGGGCCACTGG TATCCCAGTCAGGTTCAGTGGCAGTGGGTCTGGGACACAGTTC ACTCTCACCATCAGCAGCCTGCAGTCTGAAGATTTTGCAGTTT ATTATTGTCAGCAATATGATAACTGGCGGACGTTCGGCCAAGG GACCAAGCTGGAAATCAAA
366	ATX-P-563	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGT CGGAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGAGTTTT GCCGGCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCC CCTAAGCTCCTGATATATGCTGCATCCACTTTGCAAAGTGGGG TCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCAC TCTCACCATCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTAC TATTGTCAACAGGCTAACAGTTTCCCTCTCACTTTCGGCGGAG GGACCAAGGTGGAGATCAAA
367	ATX-P-570	VL – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTC TGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGTCAGAGTG TTTTATACAGCTCCAACAATAAGAATTACTTAGCTTGGTACCA CCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCA TCTACCCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCG GGTCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGC TGAAGATGTGGCAGTTTATTACTGTCAGCAATACTATAGTAGT CCTCGGACGTTCGGCCAAGGGACCAAGGTGGAAATCAAA
368	ATX-P-560	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNTAAWNWIRQSPSR GLEWLGRTYYRSKWYNDYAVSVKSRITINPDTSKNQFSLQLSSVT PQDTAIYYCASDNWNNGGPGFDPWGQGTLVTVSS

369	ATX-P-561	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSR GLEWLGRTYYRSKWYNGYAVSMKSRITINPDTSKNQFSLQLNSV TPEDTAMYYCAREGVGATTGFDYWGQGTLVTVSS
370	ATX-P-562	VH	QVQLQQSGPGLVKSSQTLSLTCAISGDTVSSNSAAWNWIRQSPSR GLEWLGRTFYRSRWSAAYAASVSSRITINPDTSKNQFSLQLTSVT PADTAVYYCAREGVGSSTGFDYWGQGTLVTVSS
371	ATX-P-566	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSR GLEWLGRTYYRSKWFNNYSVSVKSRIAINPDTSKNQFSLQLNSVT PEDTAVYYCARDLGELLDWYFDLWGRGTLVTVSA
372	ATX-P-572	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSR GLEWLGMTYYRSKWYSVFAVSVKSRITINTDTSKNQFSLQLNSV TPEDTAVYYCAREGGIVGATPFDYWGQGTLVTVSS
373	ATX-P-573	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSR GLEWLGRTYYRSKLYSDYAVSVKSRITINPDTSRNQFSLQLNSVT PEDTAVYYCAREGGYTYGYDYWGQGTLVTVSS
374	ATX-P-581	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNNAAWNWIRQSPSR GLEWLGRTYYRSKWYNAYAVSVKSRIIINPDTSRNQFSLQLNSVT PEDTAVYYCAREGGYIYGLDQWGQGTLVTVSS
375	ATX-P-587	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSR GLEWLGKTYYRSKWYNYYALSVKSRITINPDTSKNQFSLHLNSV TPEDTAVYYCARDGDYYLPSPFDLWGHGTMVTVSS
376	ATX-P-592	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSR GLEWLGRTYYRSKWYSDYPLSVKSRITINPDTSKNQFSLQLNSVT PEDTAVYYCARDSGIVETTPFDYWGQGTLVTVSS
377	ATX-P-594	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSASWNWIRQSPSR GLEWLGTTYYRSKWFNVYAVSVKSRITINPDTSKNQFSLHLNSVT PEDTAIYFCTRDRGDLLHWYFDLWGRGTLVTVSS
378	ATX-P-595	VH	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSR GLEWLGRTYYRSKWFNDYALSVKSRITINPDTSKNQFSLHLNSVT PEDTAVYYCAREPGIVAPGPFDYWGQGTLVTVSS
379	ATX-P-604	VH	QVQLQQSGPGLVKPTQTLSLTCAISGDSVSSNSAAWNWIRQSPSR GLEWLGRTYYRSKWFNGYAVSVKSRITINPDASKNQFSLHLKSV TDEDTAVYYCATDRGELLHWYFDLWGRGTLVTVSS
380	ATX-P-610	VH	QVQLQQSGPGLVKSSQTLSITCAISGDSVSSNSAAWNWIRQSPSR GLEWLGRTYYRSKWYNDYALSVKSRIIIKSDTSKNQFSLQLNSVT PEDTAVYYCAREPGIAAPGPFDYWGQGSLVTVSS
381	ATX-P-560	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATTTCCGGGGACAGTG TCTCTAGCAACACTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAAGGACATACTACAGGTC CAAGTGGTATAATGATTATGCAGTATCTGTGAAAAGTCGAATA ACCATCAACCCAGACACATCCAAGAACCAGTTCTCCCTGCAGT TGAGCTCTGTGACTCCCCAGGACACGGCTATATATTACTGTGC GAGCGATAACTGGAACAACGGAGGCCCTGGGTTCGACCCCTG GGGCCAGGGAACCCTGGTCACCGTCTCCTCA
382	ATX-P-561	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAAGGACATACTACAGGTC CAAGTGGTATAATGGTTATGCAGTCTCTATGAAAAGTCGAATA ACCATCAACCCAGACACATCCAAGAACCAGTTCTCCCTGCAGC TGAACTCTGTGACTCCCGAGGACACGGCTATGTATTATTGTGC AAGAGAGGGAGTGGGAGCTACTACAGGCTTTGACTACTGGGG CCAGGGAACCCTGGTCACCGTCTCCTCA

383	ATX-P-562	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGTCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACACTG TCTCTAGTAATAGTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAAGGACATTCTATAGGTCC AGGTGGTCTGCTGCTTATGCAGCGTCTGTGAGTAGTCGAATAA CCATCAACCCAGACACATCCAAGAACCAGTTCTCCCTGCAGCT GACCTCTGTGACTCCCGCGGACACGGCTGTGTATTACTGTGCA AGAGAGGGAGTAGGATCTTCTACAGGCTTTGACTACTGGGGCC AGGGAACCCTGGTCACCGTCTCCTCA
384	ATX-P-566	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAAGGACATACTACAGGTC CAAGTGGTTTAATAATTATTCAGTTTCTGTGAAAAGTCGAATA GCCATTAACCCAGACACATCCAAGAACCAGTTCTCCCTTCAAC TGAACTCTGTGACTCCCGAGGACACGGCTGTGTATTACTGTGC AAGAGATCTGGGGGAGTTACTTGACTGGTACTTCGATCTCTGG GGCCGTGGCACCCTGGTCACTGTCTCCGCA
385	ATX-P-572	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAATGACATACTACAGGTC CAAGTGGTATAGTGTTTTTGCAGTATCTGTGAAAAGTCGAATA ACCATCAATACAGACACATCCAAGAACCAGTTCTCCCTGCAGC TGAACTCTGTGACTCCCGAGGACACGGCTGTGTATTACTGTGC AAGAGAGGGGGGTATAGTGGGAGCCACCCCCTTTGACTACTG GGGCCAGGGAACCCTGGTCACCGTCTCTTCA
386	ATX-P-573	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGCAGGACATACTACAGGTC CAAGTTGTATAGTGATTATGCAGTATCTGTGAAAAGTCGAATA ACCATCAACCCAGACACATCCAGGAACCAGTTCTCCCTGCAGC TGAACTCTGTGACTCCCGAGGACACGGCTGTGTATTACTGTGC AAGAGAGGGGGGATACACCTATGGTTATGACTACTGGGGCCA GGGAACCCTGGTCACCGTCTCCTCA
387	ATX-P-581	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGCAACAATGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAAGGACGTACTACAGGTC CAAGTGGTATAATGCTTATGCAGTTTCTGTGAAAAGTCGAATT ATCATCAATCCAGACACATCCAGGAACCAGTTCTCCCTGCAAC TGAACTCTGTGACTCCCGAGGACACGGCTGTGTATTACTGTGC AAGAGAGGGTGGATACATCTATGGTCTTGACCAATGGGGCCA GGGAACCCTGGTCACCGTCTCCTCA
388	ATX-P-587	VH – nucleotide	CAGGTGCAGCTGCAGCAGTCGGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAAAGACATACTACAGGTC CAAGTGGTATAATTATTATGCACTATCTGTGAAAAGTCGAATA ACCATCAACCCAGACACATCCAAGAACCAGTTCTCCCTGCACC TGAACTCTGTGACTCCCGAGGACACGGCTGTGTATTACTGTGC AAGAGACGGTGACTACTACCTTCCCTCTCCTTTTGATCTCTGGG GCCACGGGACAATGGTCACCGTCTCCTCA
389	ATX-P-592	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG

			TCTCTAGCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAAGGACATACTACAGGTC CAAGTGGTATAGTGATTATCCACTATCTGTGAAAAGTCGAATA ACCATCAACCCCGACACATCCAAGAACCAGTTCTCCCTGCAGC TGAACTCTGTGACTCCCGAGGACACGGCTGTGTATTACTGTGC AAGAGACTCCGGTATAGTTGAAACCACGCCCTTTGACTATTGG GGCCAGGGAACCCTGGTCACCGTCTCCTCA
390	ATX-P-594	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGTAACAGTGCTTCTTGGAACTGGATCAGGCAGTCCCC TTCGAGAGGCCTTGAGTGGCTGGGAACGACATACTACAGGTCC AAGTGGTTTAATGTTTATGCAGTCTCTGTGAAAAGTCGAATAA CCATCAACCCAGACACATCCAAGAACCAATTCTCCCTGCACCT GAACTCTGTGACTCCCGAGGACACGGCTATATATTTCTGTACA AGAGATCGGGGGGACCTACTCCACTGGTACTTCGATCTCTGGG GCCGTGGCACCCTGGTCACTGTCTCCTCA
391	ATX-P-595	VH – nucleotide	CAGGTACAGCTGCAGCAGTCGGGTCCAGGACTGGTGAAGCCC TCGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAAGGACATACTACAGGTC CAAGTGGTTTAATGATTATGCACTATCTGTGAAAAGTCGAATA ACCATCAACCCAGACACATCCAAGAACCAGTTCTCCCTGCACC TGAACTCTGTGACTCCCGAGGACACGGCTGTGTATTACTGTGC AAGAGAACCTGGTATAGTAGCACCTGGCCCTTTTGACTACTGG GGCCAGGGAACCCTGGTCACCGTCTCCTCA
392	ATX-P-604	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCC ACGCAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGCAACAGTGCTGCATGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGGAGGACATACTACAGGTC CAAGTGGTTTAATGGTTATGCAGTATCTGTGAAAAGTCGAATA ACCATCAACCCCGACGCATCCAAGAACCAGTTCTCCCTGCACT TGAAGTCTGTGACTGACGAGGACACGGCTGTATATTACTGTGC AACAGATCGGGGGGAACTCCTCCACTGGTACTTCGATCTCTGG GGCCGTGGCACCCTGGTCACCGTCTCTTCA
393	ATX-P-610	VH – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGTCC TCGCAGACCCTCTCAATCACCTGTGCCATCTCCGGGGACAGTG TCTCTAGCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCC ATCGAGAGGCCTTGAGTGGCTGGGAAGGACATACTACAGGTC CAAGTGGTATAATGATTATGCACTATCTGTGAAAAGTCGAATA ATCATCAAGTCAGACACATCCAAGAACCAGTTCTCCCTGCAGT TGAACTCTGTGACTCCCGAGGACACGGCTGTGTACTACTGTGC AAGAGAACCGGGTATAGCAGCACCTGGTCCATTTGACTACTGG GGCCAGGGATCCCTGGTCACCGTCTCCTCA
394	ATX-P-560	VL	DIQMTQSPSSVSTSVGDRVTITCRASQGISSWLAWYQQKPGKAPK LLISAASSLQSGVPSRFSGSGSGTDFTLTISTLQPEDFASYYCQQAN SFPPTFGQGTRVEIK
395	ATX-P-561	VL	DIQMTQSPSSLSASVGDRVTITCRASQGISSWLTWYQQKPGKAPK LLIYAASSLQGGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQA NSFPPTFGQGTKVEIK
396	ATX-P-562	VL	DIQMTQSPSSVSASIGDRVTITCRASKGISIWLAWYQQKPGKAPK VLISAASSLQSGAPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQA NSFPPTFGQGTKVEIK
397	ATX-P-566	VL	EIVLTQSPGTLSLSPGDRATLSCRASQSVRNSYVAWYQQKPGQAP RLLIYGASSRATGIPDRFSGSGSGTDFSLTIGRLEPEDFVVYYCQQ YGNSPLTFGGGTKVEIK

398	ATX-P-572	VL	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQ KPGQPPKLLIYWASPRESGVPDRFSGSGSGTDFTLTISSLQAEDVA VYYCQQYYSIPRTFGQGTKVEIK
399	ATX-P-573	VL	DIQMTQSPSSVSASVGDRVTITCRASQGISSWLAWYQQKPGKAPK VLIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQA NSFPPTFGPGTKVDIK
400	ATX-P-581	VL	DIQMTQSPSSVSASVGDRVTITCRASQGVNNWLAWYQQKPGKAP KLLIHAASSLLSGVPSRFSGSGSGTDFTLTITSLQPEDFATYYCQQ ANSFPITFGQGTRLEIK
401	ATX-P-587	VL	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQ KPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVA VYYCQQYYSTPYTFGQGTKLEIK
402	ATX-P-592	VL	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQ KPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVA VYYCQQYYSTPYTFGQGTKLEIK
403	ATX-P-594	VL	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQSPR LLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQQY GRSVTFGGGTKLEIK
404	ATX-P-595	VL	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQ KPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVA VYYCQQYYSTPYTFGQGTKLEIK
405	ATX-P-604	VL	EIVLTQSPDTLSLSPGERATLSCRASQTIRSSYLAWYQLKPGQAPR LLIYGASSRATGIPDRFSGSGSGTDFTLSISRLEPEDFAVYYCQQY GRSIIFGGGTKVEIK
406	ATX-P-610	VL	DIQMTQSPSSVSASVGDRVTITCRASQGISSWLAWYQQKPGKAPK LLIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQN YRTPITFGQGTRLEIK
407	ATX-P-581	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTACATCTGT TGGAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTATT AGCAGCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCC CCTAAGCTCCTGATCTCTGCTGCATCCAGTTTGCAAAGTGGGG TCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCAC TCTCACCATCAGCACCCTGCAGCCTGAAGACTTTGCATCTTAC TATTGTCAACAGGCTAACAGTTTCCCTCCGACGTTCGGCCAAG GGACCAGGGTGGAAATCAAA
408	ATX-P-561	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCCTGTCTGCATCTGT CGGAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTATT AGCAGCTGGTTAACCTGGTATCAGCAGAAACCAGGGAAAGCC CCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAGGTGGGG TCCCATCAAGATTCAGCGGCAGTGGATCTGGGACAGATTTCAC TCTCACCATCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTAC TATTGTCAACAGGCTAACAGTTTCCCTCCGACGTTCGGCCAAG GGACCAAGGTGGAAATCAAA
409	ATX-P-573	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTAT AGGAGACAGAGTCACCATCACTTGTCGGGCGAGTAAGGGAAT TAGCATCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGGTCCTGATCTCTGCTGCATCCAGTTTGCAAAGTGGG GCCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCA CTCTCACCATCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTA CTATTGTCAACAGGCTAACAGTTTCCCTCCGACGTTCGGCCAA GGGACCAAGGTGGAGATCAAA
410	ATX-P-610	VL – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCC AGGGGACAGAGCCACCCTCTCATGCAGGGCCAGTCAGAGTGT TAGGAACAGTTACGTAGCCTGGTACCAGCAGAAACCTGGCCA GGCTCCCAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACT

			GGCATCCCAGACAGGTTCAGTGGCAGTGGGTCTGGGACAGAC TTCAGTCTCACCATCGGCAGACTGGAGCCTGAGGATTTTGTAG TGTATTATTGTCAGCAATACGGTAACTCACCTCTCACTTTCGGC GGAGGGACCAAGGTGGAGATCAAA
411	ATX-P-560	VL – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTC TGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTG TTTTATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCA GCAGAAACCTGGACAGCCTCCTAAGCTGCTCATTTACTGGGCA TCTCCCCGGGAATCCGGGGTCCCTGACCGGTTCAGTGGCAGCG GGTCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGC TGAAGATGTGGCAGTTTATTATTGTCAGCAATATTATAGTATT CCTCGGACGTTCGGCCAAGGGACCAAGGTGGAAATCAAA
412	ATX-P-562	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTAT TAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGGTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGG GTCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCA CTCTCACCATCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTA CTATTGTCAACAGGCTAACAGTTTCCCTCCCACTTTCGGCCCTG GGACCAAAGTGGATATCAAA
413	ATX-P-566	VL – nucleotide	GACATCCAGATGACTCAGTCTCCATCTTCCGTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTGT TAACAACTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGCTCCTGATCCATGCTGCATCCAGTTTGCTAAGTGGG GTCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCA CGCTCACCATCACCAGCCTGCAGCCTGAAGATTTTGCAACTTA CTATTGTCAACAGGCTAACAGTTTCCCCATCACCTTCGGCCAA GGGACACGACTGGAAATTAAA
414	ATX-P-604	VL – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTC TGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTG TTTTATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCA GCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCA TCTACCCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCG GGTCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGC TGAAGATGTGGCAGTTTATTACTGTCAGCAATATTATAGTACT CCGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAA
415	ATX-P-594	VL – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTC TGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTG TTTTATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCA GCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCA TCTAACCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCG GGTCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGC TGAAGATGTGGCAGTTTATTACTGTCAGCAATATTATAGTACT CCGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAA
416	ATX-P-572	VL – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCC AGGGGAGAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGT TAGCAGCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCA GTCTCCCAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACT GGCATCCCAGACAGGTTCAGTGGCAGTGGGTCTGGGACAGAC TTCACTCTCACCATCAGCAGACTGGAGCCTGAGGATTTTGCAG TATATTACTGTCAGCAGTATGGTAGGTCAGTCACTTTCGGCGG AGGGACCAAGCTGGAAATCAAA
417	ATX-P-587	VL – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTC TGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTG TTTTATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCA

			GCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCA TCTACCCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCG GGTCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGGC TGAAGATGTGGCAGTTTATTACTGTCAGCAATATTATAGTACT CCGTACACTTTTGGCCAGGGGACCAAGCTGGAAATCAAA
418	ATX-P-592	VL – nucleotide	GAAATAGTGCTGACTCAGTCTCCAGACACCCTATCTTTGTCTC CAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGACTA TTAGGAGCAGCTACTTAGCCTGGTACCAGCTGAAACCTGGCCA GGCTCCCAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACT GGCATCCCAGACAGGTTCAGTGGCAGTGGGTCTGGGACAGAC TTCACTCTCTCCATCAGCAGACTGGAGCCTGAAGATTTTGCAG TGTATTACTGTCAACAGTATGGCCGCTCAATCATTTTCGGCGG AGGGACCAAAGTGGAAATCAAA
419	ATX-P-595	VL – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGT AGGAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTAT TAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGC CCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGG GTCCCATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCA CTCTCACCATCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTA CTACTGTCAACAGAATTACAGAACCCCGATCACCTTCGGCCAA GGGACACGACTGGAGATTAAA

[00210] Table 5: Anti-CFHR4 antibodies (HC IgG1 Fc and LC Kappa sequences)

SEQ ID NO:	Antibody Name:	Descriptor:	Sequence:
420	ATX-P-583	HC IgG1 Fc	QVQLVQSGAEVKKPGASVKVSCKASGYTFTTYGISWVRQAPGQGLE WMGWISAYSGNTHYAQSLQDRVTMTTDTSTSTAYMEVRSLRSDDTA VYYCAKDEGYCSSTGCLNLFDPWGQGTLVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSG LYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTC PPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKF NWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYK CKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCL VKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSR WQQGNVFSCSVMHEALHNHYTQKSLSLSPG
421	ATX-P-591	HC IgG1 Fc	QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLE WMGWISAYNGNTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDT AIYYCTRDLRGTAFDYWGQGTPVTVSSASTKGPSVFPLAPSSKSTSGG TAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSV VTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPE LLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD GVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSN KALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFY PSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG NVFSCSVMHEALHNHYTQKSLSLSPG
422	ATX-P-602	HC IgG1 Fc	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGL EWMGWINPNSGGTNYAKKFQGRVTMTRDTSISTAYMELSRLRSDDT AVYYCARGDTIFRLVTPLDYWGQGTLVTVSSASTKGPSVFPLAPSSKS TSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYS LSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPC PAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW YVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCK VSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVK

			GFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRW QQGNVFSCSVMHEALHNHYTQKSLSLSPG
423	ATX-P-597	HC IgG1 Fc	QVQLVQSGAEVKKPGASVKVSCKASGYTFTNYYMQWVRQAPGQGL EWLGIIDPSGGSTTYAQKFQGRVTMTRDTSTSTVHMELRSLRSEDTA VYYCARDEGTDRPGWGYWGQGTLVTVSSASTKGPSVFPLAPSSKSTS GGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLS SVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPA PELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
424	ATX-P-601	HC IgG1 Fc	QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPGQGL EWMGIINPSGGSTNYAQKFQGRLTMTRDTSTNTVYMELSSLRSEDTA VYYCATDQSGGMDVWGKGTTVTVSSASTKGPSVFPLAPSSKSTSGGT AALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVV TVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPEL LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG VEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNK ALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPS DIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSVMHEALHNHYTQKSLSLSPG
425	ATX-P-607	HC IgG1 Fc	QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPGQGL EWMGIINPSGGSTSYAQKFQGRVTMTRDTSTNTVYMELSSLRSEDTA VYYCARDPEYSSAFDIWGQGTMVTVSSASTKGPSVFPLAPSSKSTSGG TAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSV VTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPE LLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD GVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSN KALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFY PSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG NVFSCSVMHEALHNHYTQKSLSLSPG
426	ATX-P-583	HC IgG1 Fc – nucleotide	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCTGGG GCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCTTTACCA CCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACAAGGGCTTG AGTGGATGGGATGGATCAGCGCTTACAGTGGTAACACACACTATG CACAGAGCCTCCAGGACAGAGTCACCATGACCACAGACACATCCA CGAGTACAGCCTACATGGAGGTGAGGAGCCTGAGATCTGACGACA CGGCCGTGTATTACTGTGCGAAAGATGAGGGATATTGTAGTAGTA CCGGCTGCTTAAACTTGTTCGACCCCTGGGGCCAGGGAACCCTGGT CACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTG GCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGT TGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGA ACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCT GCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCA AGTTCATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACA AACCTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGT GTGATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGC TTGGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATAC TCTAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGA CGTGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGAT GGTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAG TACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATA AAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAG GTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGA

			GGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGG TTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAG CCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGAC GGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGT GGCAGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTT ACATAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
427	ATX-P-591	HC IgG1 Fc – nucleotide	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCTGGG GCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCTTTACCA GCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACAAGGGCTTG AGTGGATGGGATGGATCAGCGCTTACAATGGTAACACAAACTATG CACAGAAGCTCCAGGGCAGAGTCACCATGACCACAGACACATCCA CGAGCACAGCCTACATGGAGCTGAGGAGCCTGAGATCTGACGACA CTGCCATTTATTACTGTACGAGAGATCTACGTGGAACTGCCTTTGA CTACTGGGGCCAGGGAACCCCGGTCACTGTCTCCTCAGCTAGCACT AAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCT CGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCC CTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTG GTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAG CCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAG ACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATGC CCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCC TGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGCC AGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCCGA AGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAATGCT AAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATCGTGTC GTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACGGCAAA GAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCCAATC GAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACCCCA GGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCAA GTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTG CTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAA CAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAG CAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATT CAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAG AAATCTCTTAGTCTTTCACCCGGT
428	ATX-P-602	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGGTGCAATCTGGGGCTGAGGTGAAGAAGCCTGGG GCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCTTCACCG GCTACTATATGCACTGGGTGCGACAGGCCCCTGGACAAGGACTTG AGTGGATGGGATGGATCAACCCTAACAGTGGTGGCACAAACTATG CAAAGAAGTTTCAGGGCAGGGTCACCATGACCAGGGACACGTCCA TCAGCACAGCCTACATGGAGTTGAGCAGGCTGAGATCTGACGACA CGGCCGTGTATTACTGTGCGAGAGGGGATACGATTTTTCGACTGGT TACCCCTCTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCC TCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCA GCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGA AAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGG CGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATC GGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCG CTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTTCA AATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAA ACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGAT CAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCA CGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGA GGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTC

			GACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGG CTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTT CCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCA AGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATG ACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATC CTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGA ATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCTCAT TTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCAGCA GGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAAT CACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
429	ATX-P-597	HC IgG1 Fc -- nucleotide	CAGGTGCAGCTGGTGCAATCTGGAGCTGAGGTGAAGAAGCCTGGG GCCTCAGTGAAGGTTTCCTGCAAGGCATCTGGATACACCTTCACCA ACTACTATATGCAGTGGGTGCGACAGGCCCCTGGACAAGGGCTTG AGTGGCTGGGAATAATCGACCCTAGTGGTGGTAGCACAACCTATG CACAGAAGTTCCAGGGCAGAGTCACCATGACCAGGGACACGTCCA CGAGCACAGTCCACATGGAGCTGAGAAGTCTGAGATCTGAGGACA CGGCCGTCTATTATTGCGCGAGAGATGAGGGAACAGATCGTCCCG GGTGGGGCTACTGGGGCCAGGGAACCCTGGTCACTGTCTCCTCAG CTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAA ATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGA TTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTG ACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCT TGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGG CACTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATAC AAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCA CACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGC GTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCC GTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAG ATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACA CAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTA TCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAAC GGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCC CCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAA CCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAA ATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGA TATTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTA TAAAACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTG TATAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAAT GTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACA CGCAGAAATCTCTTAGTCTTTCACCCGGT
430	ATX-P-601	HC IgG1 Fc -- nucleotide	CAGGTGCAGCTGGTGCAATCTGGGGCTGAGGTGAAGAAGCCTGGG GCCTCAGTGAAGGTTTCCTGCAAGGCATCTGGATACACCTTCACCA GCTACTATATGCACTGGGTGCGACAGGCCCCTGGACAAGGGCTTG AGTGGATGGGAATAATCAACCCTAGTGGTGGTAGCACAAACTACG CACAGAAGTTCCAGGGCAGACTCACCATGACCAGGGACACGTCCA CGAACACAGTCTACATGGAACTGAGTAGCCTGAGATCTGAGGACA CGGCCGTGTATTACTGTGCGACAGATCAAAGTGGGGGGATGGACG TCTGGGGCAAAGGGACCACGGTCACCGTCTCCTCAGCTAGCACTA AAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTC GGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCT GAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGT GTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCC TCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGA TAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATGCCC GCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTG

			TTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGCCA GAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCCGAA GTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAATGCTA AGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATCGTGTCG TGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACGGCAAAG AATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCCAATCG AGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAG GTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAG TATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCT GTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACA ACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCA GTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
431	ATX-P-607	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGGTGCAATCTGGGGCTGAGGTGAAGAAGCCTGGG GCCTCAGTGAAGGTTTCCTGCAAGGCATCTGGATACACCTTCACCA GTTACTATATGCACTGGGTGCGACAGGCCCCTGGACAAGGGCTTG AGTGGATGGGAATAATCAACCCTAGTGGTGGTAGCACAAGCTACG CACAGAAGTTCCAGGGCAGAGTCACCATGACCAGGGACACGTCAA CGAACACAGTCTACATGGAGCTGAGCAGCCTTCGATCTGAGGACA CGGCCGTGTATTACTGTGCGAGAGATCCCGAGTATAGCAGTGCTTT TGATATCTGGGGACAAGGGACAATGGTCACCGTCTCCTCAGCTAG CACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCG ACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTAT TTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACA AGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGT ATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTA CGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATC CCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACA ATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATC GTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACGG CAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCC AATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACC CCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAAT CAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATA TTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATA AAACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTA TAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGT ATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACG CAGAAATCTCTTAGTCTTTCACCCGGT
432	ATX-P-583	LC Kappa	DIQMTQSPSSLSASVGDRVTITCRASQNIGSYLNWYQQKPGNAPKLLI YATSTLQSGVPSRFSGSGSGTDFTLIISSLHPEDFTVYYCQQSFIIPFTFG PGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQ WKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYA CEVTHQGLSSPVTKSFNRGEC
433	ATX-P-591	LC Kappa	DIQMTQSPSSLSASVGDRVTITCRASQSINTYLNWYQQKPGKAPKLLI YAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYSCQHSFTTPFTF GPGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
434	ATX-P-602	LC Kappa	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQAPRLLI YGASSRATGIPDRFSGSGSGTQFTLTISSLQSEDFAVYYCQQYGSSPWT

			FGQGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
435	ATX-P-597	LC Kappa	DIQMTQSPSSLSASIGDRVTITCRASQSISSYLDWYQRKSGKAPKLLIY AASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYSTPLTF GGGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
436	ATX-P-601	LC Kappa	DIQMTQSPSSLSASVGDRVTITCRASQSINIYLNWYQQKPEKDPKLLIY AASSLQSGVPSRFSGSGSGTDFTLTISNLQPEDFATYYCQQSYSTPITFG QGTRLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQ WKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYA CEVTHQGLSSPVTKSFNRGEC
437	ATX-P-607	LC Kappa	DIQMTQSPSSLSASVGDRGTITCRASQSIRSYLNWYQQKPGKAPKLLI YAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYRTPVT FGPGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
438	ATX-P-583	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCGTCCTCCCTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAACATTGGCA GTTATTTAAATTGGTATCAGCAGAAACCAGGGAATGCCCCTAAAC TCCTGATCTATGCTACATCCACTTTGCAAAGTGGGGTCCCATCAAG GTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCATCATCAGC AGTCTGCACCCTGAAGATTTTACAGTTTATTACTGTCAACAGAGTT TCATTATCCCATTCACTTTCGGCCCTGGGACCAAAGTGGATATCAA ACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGAC GAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAATA ATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAATG CTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGATT CTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCAA AGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCA CCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGA GTGT
439	ATX-P-591	LC Kappa – nucleotide	GACATCCAGATGACTCAGTCTCCATCCTCCCTGTCTGCATCTGTTG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCATTAACA CCTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC TCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCAAG GTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGTCTGCAACCTGAAGATTTTGCAACTTACTCCTGTCAACATAGTT TCACTACCCCATTCACTTTCGGCCCTGGGACCAAGCTGGAAATCAA ACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGAC GAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAATA ATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAATG CTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGATT CTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCAA AGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCA CCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGA GTGT
440	ATX-P-602	LC Kappa – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCAG GGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAGCA GCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCCCA GGCTCCTCATCTATGGTGCATCCAGTAGGGCCACTGGCATCCCAGA CAGGTTCAGTGGCAGTGGGTCTGGGACACAGTTCACTCTCACCATC AGCAGCCTGCAGTCTGAAGATTTTGCAGTTTATTACTGTCAGCAGT ATGGTAGCTCACCGTGGACGTTCGGCCAAGGGACCAAAGTGGATA TCAAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCT

			GACGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACA ATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGG ATTCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAG CAAAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGAC GCACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGG TGAGTGT
441	ATX-P-597	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTATTG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCATTAGCA GCTATTTAGATTGGTATCAGCGGAAATCAGGGAAAGCCCCTAAAC TCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCAAG GTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAACAGAGTT ACAGTACCCCGCTCACTTTCGGCGGAGGGACCAAAGTGGATATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
442	ATX-P-601	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCATTAATA TCTATTTAAATTGGTATCAGCAGAAACCAGAGAAAGACCCTAAGC TCCTGATCTATGCTGCGTCCAGTTTGCAAAGTGGGGTCCCATCAAG GTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AATCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAACAGAGTT ACAGTACCCCGATCACCTTCGGCCAAGGGACACGACTGGAGATTA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
443	ATX-P-607	LC Kappa – nucleotide	GACATCCAGATGACACAGTCTCCATCCTCCCTGTCTGCATCTGTAG GAGACAGAGGCACCATCACTTGCCGGGCAAGTCAGAGCATTAGAA GTTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAAC TCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCAAG GTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAACAGAGTT ACAGAACCCCAGTCACTTTCGGCCCTGGGACCAAAGTGGATATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
444	ATX-P-564	HC IgG1 Fc	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYTMNWVRQAPGKGLE WVSSISSSSSYTYYADSVRGRFTISRDNAKNSLYLQMSSLRAEDTAVY YCARSASIAAGMDVWGKGTTVTVSSASTKGPSVFPLAPSSKSTSGGT AALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVV

			TVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPEL LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG VEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNK ALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPS DIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSVMHEALHNHYTQKSLSLSPG
445	ATX-P-568	HC IgG1 Fc	EVQLVESGGGLVQPGGSLRLSCAASGFPFSSYVMSWVRQAPGKGLE WVSVISVSGGSTFYADSVRGRFTISRDNSKNTLYLQVYSLRAEDTAV YYCAKDGLAVAGFDHWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGG TAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSV VTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPE LLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD GVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSN KALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFY PSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG NVFSCSVMHEALHNHYTQKSLSLSPG
446	ATX-P-574	HC IgG1 Fc	EVQLVESGGGLVQRGGSLRLSCVASGFTFSSYAMSWVRQAPGKGLE WVSVISGSGGTTYYADSVKGRFTISRDDSKKTLYLQMNSLRAEDTAV YYCAKRGDYGDYMDVWGKGTTVTVSSASTKGPSVFPLAPSSKSTSG GTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSS VVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAP ELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
447	ATX-P-565	HC IgG1 Fc	QVQLVESGGGVVQPGRSLRLSCAASGFTFNTYGIHWVRQAPGKGLE WVAVIWHDGSSKNYVDSVTGRFTISRDNSKNTVYLQMNSLRAEDTA VYYCARRGNWNYGFYYYYMDVWGKGTTVTVSSASTKGPSVFPLAP SSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHT CPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVK FNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEY KCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTC LVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKS RWQQGNVFSCSVMHEALHNHYTQKSLSLSPG
448	ATX-P-578	HC IgG1 Fc	EVQLVESGGGLVQPGGSLRLSCAASGFTFSRYSMNWVRQAPGKGLE WVSYISSSSSTIFHADSVKGRFTISRDNAKNSLYLQMNSLRDEDTAVY YCARGNWNYYYYMDVWGKGTTVTVSSASTKGPSVFPLAPSSKSTSGG TAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSV VTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPE LLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD GVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSN KALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFY PSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG NVFSCSVMHEALHNHYTQKSLSLSPG
449	ATX-P-569	HC IgG1 Fc	EVQLVESGGGLAQFGRSLRLSCAASGFTFDDYAMHWLRQAPGMGLE WVSGISWNSGSIGYADSVKGRFTIARDNAKNSVHLQMNSLRAEDTAL YYCAKDIGNGYTKGDVFDIWGQGTMVTVSSASTKGPSVFPLAPSSKS TSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYS LSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPC PAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW YVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCK VSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVK GFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRW QQGNVFSCSVMHEALHNHYTQKSLSLSPG

450	ATX-P-576	HC IgG1 Fc	EVQLVESGGGLVQPGRSLRLSCTASGFTFDDYEMHWVRQAPGKGLE WVSDISRNSGRIGYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAL YYCAKDIWGSGYFDYWGQGILVTVSSASTKGPSVFPLAPSSKSTSGGT AALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVV TVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPEL LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG VEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNK ALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPS DIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV FSCSVMHEALHNHYTQKSLSLSPG
451	ATX-P-588	HC IgG1 Fc	EVQLVESGGGLVQPGRSLRLSCAASGFTFEDYAMHWVRQAPGKGLE WVSGISWNSGSIGYADSVKGRFTISRDNAKKSLYLQMNSLRAEDTAL YYCTKDRDDGYNYAGVFDYWGQGTLVTVSSASTKGPSVFPLAPSSK STSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLY SLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPP CPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFN WYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKC KVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLV KGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSR WQQGNVFSCSVMHEALHNHYTQKSLSLSPG
452	ATX-P-596	HC IgG1 Fc	EVQLVESGGGLVQPGRSLRLSCAASGFSFDDYAMHWVRQVPGKGLE WVSGISWTGGSVGYADPVKGRFTISRDNAKNSLYLQMNSLRPEDTAL YYCAKDMGDGYSRNWPFDYWGQGTLVTVSSASTKGPSVFPLAPSSK STSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLY SLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPP CPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFN WYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKC KVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLV KGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSR WQQGNVFSCSVMHEALHNHYTQKSLSLSPG
453	ATX-P-600	HC IgG1 Fc	EVQLVESGGGLVQPGRSLRLSCAASGFTFDDYAMHWVRQVPGRGLE WVSGISWSGGSIGYADSVKGRFTISRDNSKNSLYLQMNSLRAEDTAL YYCTKDREDGYNYGGVFDYWGQGTLVTVSSASTKGPSVFPLAPSSKS TSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYS LSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPC PAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNW YVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCK VSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVK GFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRW QQGNVFSCSVMHEALHNHYTQKSLSLSPG
454	ATX-P-564	HC IgG1 Fc – nucleotide	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCCTGGTCAAGCCTGGG GGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAGTA GCTATACCATGAACTGGGTCCGCCAGGCTCCAGGGAAGGGGCTGG AGTGGGTGTCATCCATTAGTAGTAGTAGTAGTTACACATACTACGC AGACTCAGTGAGGGGCCGATTCACCATCTCCAGAGACAACGCCAA GAACTCACTGTATCTGCAAATGAGCAGCCTGAGAGCCGAGGACAC AGCTGTGTATTACTGTGCGAGATCGGCGAGTATAGCAGCTGGGAT GGACGTCTGGGGCAAAGGGACCACGGTCACCGTCTCCTCAGCTAG CACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCG ACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTAT TTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACA AGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGT ATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG

			TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTA CGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATC CCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACA ATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATC GTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACGG CAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCC AATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACC CCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAAT CAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATA TTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATA AAACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTA TAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGT ATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACG CAGAAATCTCTTAGTCTTTCACCCGGT
455	ATX-P-568	HC IgG1 Fc – nucleotide	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCGGGG GGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCCCCTTTAGCA GCTATGTCATGAGCTGGGTCCGCCAGGCTCCAGGGAAGGGGCTGG AGTGGGTCTCAGTTATAAGTGTTAGTGGTGGTAGTACATTCTACGC AGACTCCGTGAGGGGCCGGTTCACCATCTCCAGAGACAATTCCAA GAACACGCTGTATCTGCAAGTGTACAGCCTGCGAGCCGAGGACAC GGCCGTATATTACTGTGCGAAAGATGGTTTGGCAGTGGCTGGTTTT GACCACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAGCTAGC ACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGA CCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTT CCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAG TGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTAT AGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTC AGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACAT GCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTT CCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACG CCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCC GAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAAT GCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATCGT GTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACGGCA AAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCCAA TCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACCCC AGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCA AGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATT GCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAA ACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATA GCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCA GAAATCTCTTAGTCTTTCACCCGGT
456	ATX-P-574	HC IgG1 Fc – nucleotide	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCGGGGG GGGTCCCTGAGACTCTCCTGTGTAGCCTCTGGATTCACCTTTAGTA GCTATGCCATGAGCTGGGTCCGCCAGGCTCCAGGGAAGGGGCTGG AGTGGGTCTCAGTTATTAGTGGTAGTGGTGGTACCACATACTACGC AGACTCCGTGAAGGGCCGGTTCACCATCTCCAGAGACGATTCCAA GAAGACACTGTATCTGCAAATGAACAGCCTGAGAGCCGAGGACAC GGCCGTATATTATTGTGCGAAAAGGGGTGACTACGGGGACTACAT GGACGTCTGGGGCAAAGGGACCACGGTCACCGTCTCCTCAGCTAG CACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCG ACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTAT TTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACA AGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGT

			ATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTA CGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATC CCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACA ATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATC GTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACGG CAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCC AATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACC CCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAAT CAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATA TTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATA AAACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTA TAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGT ATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACG CAGAAATCTCTTAGTCTTTCACCCGGT
457	ATX-P-565	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGGTGGAGTCTGGGGGAGGCGTGGTCCAGCCTGGG AGGTCCCTGAGACTCTCCTGTGCAGCGTCTGGATTCACCTTCAATA CCTATGGCATCCACTGGGTCCGCCAGGCTCCAGGCAAGGGACTGG AGTGGGTGGCAGTTATATGGCATGATGGAAGTAGTAAAAACTATG TAGACTCCGTGACGGGCCGATTCACCATCTCCAGAGACAATTCCA AGAACACGGTGTATCTGCAAATGAACAGCCTGAGAGCCGAGGACA CGGCTGTTTATTACTGTGCGAGAAGGGGTAACTGGAACTACGGCT TCTACTACTACTACATGGACGTCTGGGGCAAAGGAACCACGGTCA CCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGC CCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTG CCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAAC AGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGC AATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAG TTCATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAA CCTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGT GATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTT GGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTC TAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACG TGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAA GATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAA GCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGT CAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
458	ATX-P-578	HC IgG1 Fc – nucleotide	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGTTTGGTACAGCCTGGG GGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAGTA GATATAGCATGAACTGGGTCCGCCAGGCTCCAGGGAAGGGGCTGG AGTGGGTTTCATACATTAGTAGTAGTAGTAGTACCATTTTCCATGC AGACTCTGTGAAGGGCCGATTCACCATCTCCAGAGACAATGCCAA GAACTCACTGTACCTGCAAATGAACAGCCTGAGAGACGAGGACAC GGCTGTGTATTACTGTGCGAGAGGGAACTGGAACTACTACTACAT GGACGTCTGGGGCAAAGGGACCACGGTCACCGTCTCCTCAGCTAG

			CACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCG ACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTAT TTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACA AGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGT ATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTA CGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATC CCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACA ATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATC GTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACGG CAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCC AATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACC CCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAAT CAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATA TTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATA AAACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTA TAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGT ATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACG CAGAAATCTCTTAGTCTTTCACCCGGT
459	ATX-P-569	HC IgG1 Fc – nucleotide	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGCACAGTTTGGC AGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTTGATG ATTATGCCATGCACTGGCTCCGGCAAGCTCCAGGGATGGGCCTGG AGTGGGTCTCAGGTATTAGTTGGAATAGCGGGAGCATAGGCTATG CGGACTCTGTGAAGGGCCGATTCACCATCGCCAGAGACAACGCCA AGAACTCCGTGCATCTGCAAATGAACAGTCTGAGAGCTGAGGACA CGGCCTTGTATTACTGTGCAAAAGATATAGGAAATGGATATACGA AGGGTGATGTTTTTGATATCTGGGGACAAGGGACAATGGTCACCG TCTCTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCC GTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCT TGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGT GGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAAT CATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTC ATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACC TTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGA TAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGT GGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGC CTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGAT TGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAA CCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTT ATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGG AGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCT CATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCA GCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACAT AATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
460	ATX-P-576	HC IgG1 Fc – nucleotide	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCTGGC AGGTCCCTGAGACTCTCCTGTACAGCCTCTGGATTCACATTTGATG ATTATGAAATGCACTGGGTCCGGCAAGCTCCAGGGAAGGGCCTGG AGTGGGTCTCAGATATTAGTCGGAACAGTGGTAGAATAGGCTATG

			CGGACTCTGTGAAGGGCCGATTCACCATTTCCAGAGACAACGCCA AGAACTCCCTGTATCTACAAATGAACAGTCTGAGAGCTGAGGACA CGGCCTTGTATTACTGTGCAAAAGATATTTGGGGATCGGGGTACTT TGACTATTGGGGCCAGGGAATCCTGGTCACCGTCTCCTCAGCTAGC ACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGA CCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTT CCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAG TGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTAT AGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTC AGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACAT GCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTT CCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACG CCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCC GAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAAT GCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATCGT GTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACGGCA AAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCCAA TCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACCCC AGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCA AGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATT GCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAA ACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATA GCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCA GAAATCTCTTAGTCTTTCACCCGGT
461	ATX-P-588	HC IgG1 Fc – nucleotide	GAAGTGCAGCTGGTGGAGTCCGGGGGAGGCTTGGTACAACCTGGC AGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTTGAAG ATTATGCCATGCACTGGGTCCGGCAAGCTCCAGGGAAGGGCCTGG AGTGGGTCTCAGGTATTAGTTGGAATAGTGGTAGCATAGGCTATG CGGACTCTGTGAAGGGCCGATTCACCATCTCCAGAGACAACGCCA AGAAATCCCTGTATCTGCAAATGAACAGTCTGAGAGCTGAGGACA CGGCCTTATATTACTGTACAAAAGATAGAGATGATGGCTACAACT ATGCGGGGGTCTTTGACTACTGGGGCCAGGGAACCCTGGTCACTG TCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCC GTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCT TGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGT GGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAAT CATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTC ATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACC TTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGA TAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGT GGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGC CTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGAT TGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAA CCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTT ATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGG AGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCT CATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCA GCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACAT AATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT

462	ATX-P-596	HC IgG1 Fc – nucleotide	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCTGGC AGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGGTTCAGTTTTGATG ATTATGCCATGCACTGGGTCCGGCAAGTTCCAGGGAAGGGCCTGG AATGGGTCTCAGGTATTAGTTGGACTGGTGGTAGCGTAGGCTATG CGGACCCCGTGAAGGGCCGATTCACCATCTCCAGAGACAACGCCA AGAACTCCCTGTATCTGCAAATGAACAGTCTGAGACCTGAGGACA CGGCCTTGTATTACTGTGCAAAAGATATGGGAGACGGGTATAGCA GAAACTGGCCCTTTGACTACTGGGGCCAGGGAACCCTGGTCACCG TCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCC GTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCT TGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGT GGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAAT CATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTC ATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACC TTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGA TAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGT GGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGC CTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGAT TGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAA CCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTT ATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGG AGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCT CATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCA GCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACAT AATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
463	ATX-P-600	HC IgG1 Fc – nucleotide	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCTGGC AGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTTGATG ATTATGCCATGCACTGGGTCCGGCAAGTTCCAGGGAGGGGCCTGG AGTGGGTCTCAGGTATTAGTTGGAGTGGTGGCAGCATAGGCTATG CGGACTCTGTGAAGGGCCGATTCACCATCTCCAGAGACAACTCCA AGAACTCCCTGTATCTGCAAATGAACAGTCTGAGAGCTGAGGACA CGGCCTTGTATTACTGTACAAAAGATAGAGAAGATGGATACAACT ATGGGGGGGTCTTTGACTACTGGGGCCAGGGAACCCTGGTCACCG TCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCC GTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCT TGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGT GGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAAT CATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTC ATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACC TTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGA TAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGT GGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGC CTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGAT TGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAA CCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTT ATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGG

			AGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCT CATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCA GCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACAT AATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
464	ATX-P-564	LC Kappa	DIVMTQSPLSLPVTPGEPASISCRSSQSLLHSTGYNFLDWYLQKPGLSP QLLIYLASNRASGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCMQA LQTPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFY PREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYE KHKVYACEVTHQGLSSPVTKSFNRGEC
465	ATX-P-568	LC Kappa	DIQMTQSPSTLSASVGDRVTITCRASQSISTWLAWYQQKPGKAPKLLI HKASGLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYNSFSLIF GGGTRVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
466	ATX-P-574	LC Kappa	DIQMTQSPSSVSASVGDRVTITCRASQGITTWLAWYQQKPGKAPKLLI FGASSLESGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQANSFPWT FGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
467	ATX-P-565	LC Kappa	DIVMTQSPLSLPVTPGEPASISCRSSQRLLHSSGYNYLDWYLQKPGQS PQLLIYLGSSRASGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCMQG LQTPPTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFY PREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYE KHKVYACEVTHQGLSSPVTKSFNRGEC
468	ATX-P-578	LC Kappa	DIQMTQSPSTLSASVGDRVTISCRASQSVNSWLAWYQQKPGKAPKLL IYKASNLEGGVPSSFSGSGSGTEFTLTISSLQPDDFATYYCQQYDTSWT FGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
469	ATX-P-569	LC Kappa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSYT FGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
470	ATX-P-576	LC Kappa	DIQMTQSPSSVSASVGDRVTITCRTSQGIRNWLAWYQQKPGKAPKLLI YAASSLQTGGPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQANSFPYT FGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
471	ATX-P-588	LC Kappa	EIVLTQSPATLSVSPGERATLSCRASQSVSSNLAWYQQKPGQAPRLLI YGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQQYGSSFTF GPGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
472	ATX-P-596	LC Kappa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPG QPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQ QYGSSPMYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLL NNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSK ADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
473	ATX-P-600	LC Kappa	EIVLTQSPGTLSLSPGERATLSCRASQNVRGSYLAWYQQKPGQAPRLL IYGASNRATDIPDRFSGSGSGTDFTLTISGLEPEDFVVYYCQQYGSSYT FGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC

474	ATX-P-564	LC Kappa – nucleotide	GATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCCTG GAGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGAGCCTCCTGCA TAGTACTGGATACAACTTTTTGGATTGGTACCTGCAGAAGCCAGG GCTGTCTCCACAGCTCCTGATCTATTTGGCTTCTAATCGGGCCTCC GGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAGGCACAGATTTT ACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTTGGGGTTTAT TACTGCATGCAAGCTCTACAAACTCCGTACACTTTTGGCCAGGGGA CCAAGCTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTCTGTA GTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGTACAAT GGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTG TTACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCAC CCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTTACGC ATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTCACAAAATC GTTTAACCGCGGTGAGTGT
475	ATX-P-568	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCCTCTGTAG GAGACAGAGTCACCATCACTTGCCGGGCCAGCCAGAGTATTAGTA CCTGGTTGGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC TCCTGATCCATAAGGCGTCTGGTTTAGAAAGTGGGGTCCCATCAA GATTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCATCA GCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACAGTA TAATAGTTTTTCTCTCATTTTCGGCGGAGGGACCAGGGTGGAGATC AAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTG ACGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAA TAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAA TGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGA TTCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGC AAAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACG CACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
476	ATX-P-574	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTATTACCA CCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC TCCTGATCTTTGGTGCATCTAGTTTGGAAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTA ACAGTTTCCCGTGGACGTTCGGCCAAGGGACCAAGGTGGAAATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
477	ATX-P-565	LC Kappa – nucleotide	GATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCCTG GAGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGCGCCTCCTGCA TAGTAGTGGATACAATTATTTGGATTGGTATCTGCAGAAGCCAGG ACAGTCTCCACAGCTCCTGATCTATTTGGGTTCTAGTCGGGCCTCC GGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAGGCACAGATTTT ACACTGAAAATCAGCAGGGTGGAGGCTGAGGATGTTGGGGTTTAT TACTGCATGCAAGGTCTACAAACTCCTCCGACGTTCGGCCAAGGG ACCAAGGTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTA TCTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTCTGT AGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGTACAA TGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGT

			GTTACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTTACG CATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTCACAAAAT CGTTTAACCGCGGTGAGTGT
478	ATX-P-578	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTAG GAGACAGAGTCACCATCAGTTGCCGGGCCAGTCAGAGTGTTAATA GCTGGTTGGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAAC TCCTGATCTATAAGGCGTCTAATTTAGAAGGTGGGGTCCCATCAAG TTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCATCAGC AGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACAATATG ATACTTCTTGGACGTTCGGCCAAGGGACCAAGGTGGAGATCAAAC GTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAATAAT TTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAATGCT TTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGATTCT AAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCAAAG CCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGAGT GT
479	ATX-P-569	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTAG GAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATTA CCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAACC TCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCATCAG CAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACAGTAT AGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGAGATC AAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTG ACGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAA TAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAA TGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGA TTCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGC AAAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACG CACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
480	ATX-P-576	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGTCGGACGAGTCAGGGTATTAGAA ACTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAAC TCCTGATCTATGCTGCATCCAGTTTGCAAACTGGGGGCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTA ACAGTTTCCCGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
481	ATX-P-588	LC Kappa – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGCCACCCTGTCTGTGTCTCCAG GGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAGCA GCAACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCCCAGGC TCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCCAGACA GGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCACCATCA GCAGACTGGAGCCTGAAGATTTTGCAGTGTATTACTGTCAGCAGT ATGGTAGCTCATTCACTTTCGGCCCTGGGACCAAAGTGGATATCAA

			ACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGAC GAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAATA ATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAATG CTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGATT CTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCAA AGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCA CCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGA GTGT
482	ATX-P-596	LC Kappa – nucleotide	GACATCGTGATGACTCAGTCTCCAGACTCCCTGGCTGTGTCTCTGG GCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTAT ACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGAAAC CAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCCGGGA ATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGACAGA TTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTT TATTACTGTCAGCAGTATGGTAGCTCACCCATGTACACTTTTGGCC AGGGGACCAAGCTGGAGATCAAACGTACGGTAGCTGCCCCTTCAG TTTTTATCTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGC TTCTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAA GTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCACAG GAAAGTGTTACGGAGCAGGATTCTAAAGATTCCACATATTCACTC AGCTCCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAA GTTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTC ACAAAATCGTTTAACCGCGGTGAGTGT
483	ATX-P-600	LC Kappa – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCAG GGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAATGTTAGGG GCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCCCA GGCTCCTCATATATGGTGCATCCAACAGGGCCACTGACATCCCAG ACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCACCA TCAGCGGCCTGGAGCCTGAAGATTTTGTAGTGTATTACTGTCAGCA GTATGGTAGTTCGTACACTTTTGGCCAGGGGACCAAGGTGGAGAT CAAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCT GACGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACA ATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGG ATTCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAG CAAAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGAC GCACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGG TGAGTGT
484	ATX-P-571	HC IgG1 Fc	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSRNWWSWVRQPPGKGLE WIGEIYHGGTTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAADTAVYY CARGGLRLGELSPNAFDIWGQGTMVTVSSASTKGPSVFPLAPSSKSTS GGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLS SVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPA PELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
485	ATX-P-577	HC IgG1 Fc	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSNWWTWVRQPPGKGLE WIGETYHDGSTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAADTAVY YCLEFYFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCL VKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSL GTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVF LFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNA KTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIE KTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEW

			ESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVM HEALHNHYTQKSLSLSPG
486	ATX-P-579	HC IgG1 Fc	QVQLQESGPGLVKPSGTLSLTCAVSGASISTSNWWTWVRQPPGKGLE WIGEIYHDGSTNYSPSLQSRVTISVDKSKNQFSLTLTSVTAADTAIYYC GDFYIDVWGNGTTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVK DYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGT QTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLF PPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKT KPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTI SKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWES NGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMH EALHNHYTQKSLSLSPG
487	ATX-P-580	HC IgG1 Fc	QVQLQESGPGLVKPSGTLSLTCAVSGGSISTSDWWTWVRQPPGKGLE WIGEIYHSGSTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAADTAVYY CADWYFDLWGRGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCL VKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSL GTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVF LFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNA KTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIE KTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEW ESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVM HEALHNHYTQKSLSLSPG
488	ATX-P-582	HC IgG1 Fc	QVQLQESGPGLVKPSGTLSLTCAVSGGSISISKWWSWVRQPPGKGLE WIGEIYHTGSTNYHPSLKSRVTISVDKSKNQFYLKLNSVTAADTAVY YCARDELRLGELSPSLDIWGQGTMVTVSSASTKGPSVFPLAPSSKSTS GGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLS SVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPA PELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
489	ATX-P-598	HC IgG1 Fc	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSNWWSWVRQSPGKGLE WIGEIYHSGTTNYNPSLKSRVTISVDKSKNQFSLKLSSATAADTAVYY CARDRLRLGESSSDVFDIWGQGTMVTVSSASTKGPSVFPLAPSSKSTS GGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLS SVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPA PELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
490	ATX-P-603	HC IgG1 Fc	QVQLQESGPGLVKPSGTLSLTCAVSGGSISGSHWWSWFRQPPGKGLE WIGEIYHTGSTNKNPSLKSRVTISLDKSKNQFSLRLRSVTDADTAVYY CARDQYTGSPRDAFDIWGQGTMVTVSSASTKGPSVFPLAPSSKSTSG GTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSS VVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAP ELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
491	ATX-P-608	HC IgG1 Fc	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSNWWSWVRQSPGKGLE WIGEIYHTGSTNKKPSLKSRVIISVDKSKNQFSLKLISVNAADTAIYYC ARDREGGTTEAFDIWGQGTMVTVSSASTKGPSVFPLAPSSKSTSGGTA ALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVT

			VPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELL GGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV EVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKA LPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSD IAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVF SCSVMHEALHNHYTQKSLSLSPG
492	ATX-P-609	HC IgG1 Fc	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSNWWSWVRQPPGKGLE WIGEIYHSGSTNYNPSLKSRVTISVDKSKNQFSLKLRSVTAADTAVYY CARDQLSSGPTDAFDIWGQGTMVTVSSASTKGPSVFPLAPSSKSTSGG TAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSV VTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPE LLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD GVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSN KALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFY PSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG NVFSCSVMHEALHNHYTQKSLSLSPG
493	ATX-P-563	HC IgG1 Fc	QVQLQESGPGLMKPSETLSLTCTVSGGSISSHYWSWIRQPPGKGLEWI GYIFYSGNINYNPSLKSRVTISVDTSKNQFSLKLRSVTTADTAVYYCA RDRGGSYSYHFDCWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTA ALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVT VPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELL GGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV EVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKA LPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSD IAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVF SCSVMHEALHNHYTQKSLSLSPG
494	ATX-P-570	HC IgG1 Fc	QVQLQESGPGLVKPSETMSLTCTVSGGSFTGYYWSWIRQPPGKGLEW IGYVHYSGGTKSNPSLKSRVTISVDTSKNQFSLKLSSVTAADTAVYYC ARERYEWNSYFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTA ALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVT VPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELL GGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV EVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKA LPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSD IAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVF SCSVMHEALHNHYTQKSLSLSPG
495	ATX-P-571	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GGGACCCTGTCCCTCACCTGTGCTGTCTCGGGTGGCTCCATCAGTA GTCGTAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGGGGC TGGAGTGGATTGGGGAAATCTATCATGGTGGGACCACCAACTACA ACCCGTCCCTTAAGAGTCGAGTCACCATATCAGTAGACAAGTCCA AGAACCAATTCTCCCTGAAGCTGAGTTCTGTGACCGCCGCGGACA CGGCCGTGTATTACTGTGCGAGAGGGGGATTACGTTTGGGGGAGT TATCGCCTAATGCTTTTGATATCTGGGGACAAGGGACAATGGTCAC CGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCC CCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGC CTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACA GTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCA ATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGT TCATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAA CCTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGT GATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTT GGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTC TAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACG TGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA

			CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAA GATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAA GCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGT CAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
496	ATX-P-577	HC IgG1 Fc -- nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAGCA GTAGTAACTGGTGGACTTGGGTCCGCCAGCCCCCAGGGAAGGGGC TGGAGTGGATTGGGGAAACCTATCATGATGGGAGCACCAACTACA ACCCGTCCCTCAAGAGTCGAGTCACCATTTCAGTAGACAAGTCCA AGAACCAATTCTCCCTGAAACTGAGTTCTGTGACCGCCGCGGACA CGGCCGTGTATTACTGTTTGGAATTCTACTTTGACTACTGGGGCCA GGGAACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCT GTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGT TTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGT GGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTGC AATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACGCGTA GAACCGAAATCGTGTGATAAAACTCACACATGCCCGCCATGCCCG GCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTGTTCCCGCCGA AGCCTAAAGATACTCTAATGATCAGCCGTACGCCAGAGGTGACAT GTGTCGTGGTTGACGTGTCCCACGAAGATCCCGAAGTTAAGTTCA ATTGGTATGTTGATGGTGTAGAGGTACACAATGCTAAGACTAAAC CTCGCGAGGAGCAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCT GACCGTCCTTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTG CAAGGTAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCAT TTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCT TCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACG TGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGG AATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGT AGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGT TATGCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGT CTTTCACCCGGT
497	ATX-P-579	HC IgG1 Fc -- nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GGGACCCTGTCCCTCACCTGCGCTGTGTCTGGTGCCTCCATCAGCA CAAGTAATTGGTGGACTTGGGTCCGCCAGCCCCCAGGGAAGGGGC TGGAGTGGATTGGTGAAATCTATCATGATGGGAGCACCAACTACA GCCCGTCCCTCCAGAGTCGAGTCACCATATCAGTAGACAAGTCCA AGAACCAGTTCTCCCTGACGCTGACCTCTGTGACCGCCGCGGACA CGGCCATTTATTATTGTGGTGACTTCTACATAGACGTCTGGGGCAA CGGGACCACGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCT GTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGT TTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGT GGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTGC AATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACGCGTA GAACCGAAATCGTGTGATAAAACTCACACATGCCCGCCATGCCCG GCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTGTTCCCGCCGA

			AGCCTAAAGATACTCTAATGATCAGCCGTACGCCAGAGGTGACAT GTGTCGTGGTTGACGTGTCCCACGAAGATCCCGAAGTTAAGTTCA ATTGGTATGTTGATGGTGTAGAGGTACACAATGCTAAGACTAAAC CTCGCGAGGAGCAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCT GACCGTCCTTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTG CAAGGTAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCAT TTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCT TCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACG TGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGG AATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGT AGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGT TATGCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGT CTTTCACCCGGT
498	ATX-P-580	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAGCA CTAGTGACTGGTGGACTTGGGTCCGCCAGCCCCCAGGGAAGGGGC TGGAGTGGATTGGGGAAATCTATCATAGTGGGAGCACCAACTACA ACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAATCCA AGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCCGCGGACA CGGCCGTGTATTACTGTGCGGACTGGTACTTCGATCTCTGGGGCCG TGGCACCCTGGTCACTGTCTCCTCAGCTAGCACTAAAGGGCCTTCT GTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGT TTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGT GGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTGC AATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACGCGTA GAACCGAAATCGTGTGATAAAACTCACACATGCCCGCCATGCCCG GCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTGTTCCCGCCGA AGCCTAAAGATACTCTAATGATCAGCCGTACGCCAGAGGTGACAT GTGTCGTGGTTGACGTGTCCCACGAAGATCCCGAAGTTAAGTTCA ATTGGTATGTTGATGGTGTAGAGGTACACAATGCTAAGACTAAAC CTCGCGAGGAGCAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCT GACCGTCCTTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTG CAAGGTAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCAT TTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCT TCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACG TGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGG AATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGT AGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGT TATGCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGT CTTTCACCCGGT
499	ATX-P-582	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GGGACCCTGTCCCTCACCTGCGCTGTGTCTGGTGGCTCCATCAGCA TTAGTAAATGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGGGAC TGGAGTGGATTGGGGAAATCTATCATACTGGGAGCACCAACTACC ACCCGTCCCTCAAGAGCCGAGTCACCATATCAGTAGACAAGTCCA AGAACCAATTCTACCTGAAGCTGAACTCTGTGACCGCCGCGGACA CGGCCGTATATTACTGTGCGAGAGATGAATTACGGTTGGGGGAGT TATCGCCCTCTCTTGATATCTGGGGACAAGGGACAATGGTCACCGT CTCTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCG TCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTT GTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGT GGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAAT

			CATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTC ATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACC TTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGA TAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGT GGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGC CTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGAT TGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAA CCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTT ATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGG AGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCT CATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCA GCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACAT AATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
500	ATX-P-598	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAGCA GTAGTAACTGGTGGAGTTGGGTCCGCCAGTCCCCAGGGAAGGGGC TGGAATGGATTGGGGAAATCTATCATAGTGGGACCACCAACTACA ACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGTCCA AGAACCAGTTCTCCCTGAAGCTGAGCTCTGCGACCGCCGCGGACA CGGCCGTGTATTATTGTGCGAGAGATAGATTACGTTTGGGGGAGT CATCGTCCGATGTTTTTGATATCTGGGGACAAGGGACAATGGTCAC CGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCC CCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGC CTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACA GTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCA ATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGT TCATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAA CCTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGT GATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTT GGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTC TAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACG TGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAA GATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAA GCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGT CAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
501	ATX-P-603	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAGCG GTAGTCACTGGTGGAGTTGGTTCCGCCAGCCCCCAGGAAAGGGGC TGGAGTGGATTGGGGAAATCTATCATACTGGGAGCACCAACAAAA ACCCGTCCCTCAAGAGTCGAGTCACTATCTCATTAGACAAGTCCAA GAATCAGTTCTCCCTGAGGCTGAGGTCTGTGACCGACGCGGACAC GGCCGTGTATTACTGTGCGAGAGATCAGTATACTGGGAGCCCAAG GGATGCTTTTGATATCTGGGGACAAGGGACAATGGTCACCGTCTC

			CTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCC AGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTG AAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGG GCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCAT CGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATC GCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTTC AAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAA AACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGT CCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGA TCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCC ACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCT CGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTG GCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACT TCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACC AAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAAT GACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTAT CCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAG AATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCTCA TTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCAGC AGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAA TCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
502	ATX-P-608	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAGCA GTAGTAACTGGTGGAGTTGGGTCCGCCAGTCCCCAGGGAAGGGGC TGGAGTGGATTGGGGAAATCTATCATACTGGGAGCACCAACAAAA AACCGTCCCTCAAGAGTCGAGTCATCATATCAGTAGACAAGTCCA AGAACCAGTTCTCCCTGAAACTGATCTCTGTGAACGCCGCGGACA CGGCCATATATTACTGTGCGAGAGATCGGGAAGGGGGAACTACTG AAGCTTTTGATATCTGGGGACAAGGGACAATGGTCACCGTCTCTTC AGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGC AAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAA GATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCG CTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGG GCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCT GGGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAA TACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAAC TCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCC AGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCA GCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACG AAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGG TACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGA CCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCT TAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCC GGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAG AGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACT AAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTA GCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATA ATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTT TCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGG CAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCAC TACACGCAGAAATCTCTTAGTCTTTCACCCGGT
503	ATX-P-609	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAGCA GTAGTAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGGGGC TGGAGTGGATTGGGGAAATCTATCATAGTGGGAGCACCAACTACA

			ACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGTCCA AGAACCAGTTCTCCCTGAAGCTGAGGTCTGTGACCGCCGCGGACA CGGCCGTTTATTACTGTGCGAGAGATCAACTAAGTAGCGGACCTA CGGATGCTTTTGATATCTGGGGACAAGGGACAATGGTCACCGTCT CTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTC CAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGT GAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGG GGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCA TCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCAT CGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTTC AAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAA AACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGT CCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGA TCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCC ACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCT CGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTG GCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACT TCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACC AAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAAT GACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTAT CCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAG AATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCTCA TTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCAGC AGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAA TCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
504	ATX-P-563	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGATGAAGCCTTCG GAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCATCAGTA GTCACTACTGGAGCTGGATCCGGCAACCCCCAGGGAAGGGACTGG AGTGGATTGGATATATCTTTTACAGTGGGAACATAAATTACAACCC CTCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGAA CCAGTTCTCCCTGAAGCTGAGGTCTGTGACCACTGCGGACACGGC CGTATATTACTGTGCGAGAGATCGAGGTGGGAGCTATTCGTACCA CTTTGACTGCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAGCT AGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAAT CGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATT ATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGA CAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTT GTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGC ACTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCAC ACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGC GTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCC GTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAG ATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACA CAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTA TCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAAC GGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCC CCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAA CCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAA ATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGA TATTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTA TAAAACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTG TATAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAAT GTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACA CGCAGAAATCTCTTAGTCTTTCACCCGGT

505	ATX-P-570	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTCG GAGACTATGTCCCTCACCTGCACTGTCTCTGGTGGCTCCTTCACTG GATACTACTGGAGTTGGATCCGGCAGCCCCCAGGGAAGGGACTGG AGTGGATTGGATATGTCCATTACAGTGGGGGCACCAAAAGCAACC CCTCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCAAGA ACCAGTTTTCCCTGAAGCTGAGCTCTGTGACCGCTGCGGACACGGC CGTGTATTACTGTGCGAGAGAGAGGTATGAGTGGAACTCCTACTTT GACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAGCTAGC ACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGA CCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTT CCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAG TGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTAT AGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTC AGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACAT GCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTT CCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACG CCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCC GAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAAT GCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATCGT GTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACGGCA AAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCCAA TCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACCCC AGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCA AGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATT GCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAA ACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATA GCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCA GAAATCTCTTAGTCTTTCACCCGGT
506	ATX-P-571	LC Kappa	DIQMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPGKAPKVLI YAASSLQSGIPSRFSGSGSGTDFTLTISSLQPEDFATYYCQETYSVPLTF GGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
507	ATX-P-577	LC Kappa	DIQMTQSPSSLSASVGDRVTITCRASQDIRNDLGWYQQKPGKVPKRLI YAASSLQSGVPSRFSGSGSGTEFTLTISSLQPEDFASYYCLQYNNYPFT LGPGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
508	ATX-P-579	LC Kappa	DIQMTQSPSSLSASVGDRVTITCRASQGIRKDLGWYQQKPGKAPKRLI YTASTLQSGVPSRFSGSGSGTEFTLTISSLQPEDFATYYCLQYNNYPFT FGPGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
509	ATX-P-580	LC Kappa	DIQMTQSPSSLSASVGDRVTITCRASQGIRNDLGWYQQKPGKAPKRLI YAASSLQSGVPSRFSGSGSGTEFTLAISSLQPEDFATYYCLHFNSYPFT FGPGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
510	ATX-P-582	LC Kappa	DIQMTQSPSSLSASVGDRVTITCRASQNINNYLNWFRQKPGKAPKLLI FAASSLQSGVPSRFSGSESGTDFTLTISSLQPEDFATYYCQQSYSTPLTF GGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC

511	ATX-P-598	LC Kappa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPG QPPELLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDMAVYYCQ QFYNTPYTFGQGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLN NFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKA DYEKHKVYACEVTHQGLSSPVTKSFNRGEC
512	ATX-P-603	LC Kappa	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQAPRLLI YGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQHYGNSPLT FGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
513	ATX-P-608	LC Kappa	EIVMTQSPATLSVSPGERATLSCRASQSVSSNLAWYQQKPGQAPRLLI YGASTRATGIPVRFSGSGSGTQFTLTISSLQSEDFAVYYCQQYDNWRT FGQGTRLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
514	ATX-P-609	LC Kappa	EIVMTQSPATLSVSPGERATLSCRASQSVSSNLAWYQQKPGQAPRLLI YGASTRATGIPVRFSGSGSGTQFTLTISSLQSEDFAVYYCQQYDNWRT FGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
515	ATX-P-563	LC Kappa	DIQMTQSPSSVSASVGDRVTITCRASQSFAGWLAWYQQKPGKAPKLL IYAASTLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQANSFPL TFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREA KVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHK VYACEVTHQGLSSPVTKSFNRGEC
516	ATX-P-570	LC Kappa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYHQKPG QPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQ QYYSSPRTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNN FYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKAD YEKHKVYACEVTHQGLSSPVTKSFNRGEC
517	ATX-P-571	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTGG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCATTAGCA GCTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGG TCCTGATCTATGCTGCATCCAGTTTGCAGAGTGGGATCCCATCACG GTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAAGAGACTT ACAGTGTTCCGCTCACTTTCGGCGGAGGGACCAAGGTGGAGATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
518	ATX-P-577	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGGACATTAGAA ATGATTTAGGCTGGTATCAGCAGAAACCAGGGAAAGTCCCTAAGC GCCTGATCTATGCTGCATCTAGTTTGCAAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACAATCAG CAGCCTGCAGCCTGAAGATTTCGCAAGTTATTACTGTCTACAGTAT AATAATTATCCATTCACTCTCGGCCCTGGGACCAAAGTGGATATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT

			GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
519	ATX-P-579	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGGGCATTAGAA AAGATTTAGGCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC GCCTGATCTATACTGCATCCACTTTACAAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACAATCAG CAGCCTGCAGCCTGAAGATTTTGCAACTTATTACTGTCTACAGTAT AATAATTACCCATTCACTTTCGGCCCTGGGACCAAAGTGGATATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
520	ATX-P-580	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCTTCTGTCG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGGGCATTAGAA ATGATTTAGGCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC GCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCGCAATCAG CAGCCTGCAGCCTGAAGATTTTGCAACTTATTACTGTCTACACTTT AATAGTTACCCATTCACTTTCGGCCCTGGGACCAAAGTGGATATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
521	ATX-P-582	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAACATTAACA ACTATTTAAATTGGTTCCGGCAGAAACCAGGGAAAGCCCCTAAGC TCCTGATCTTTGCTGCATCCAGTTTACAAAGTGGGGTCCCATCAAG ATTCAGTGGCAGTGAATCTGGGACAGATTTCACTCTCACCATCAGC AGTCTGCAACCTGAGGATTTTGCGACTTACTACTGTCAACAGAGTT ACAGTACCCCTCTCACTTTCGGCGGAGGGACCAAGGTGGAGATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
522	ATX-P-598	LC Kappa – nucleotide	GACATCGTGATGACTCAGTCTCCAGACTCCCTGGCTGTGTCTCTGG GCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTAT ACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGAAAC CAGGACAGCCTCCTGAGCTGCTCATTTACTGGGCATCTACCCGGGA ATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGACAGA TTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATATGGCAGTT

			TATTACTGTCAACAATTTTATAATACTCCGTACACTTTTGGCCAGG GGACCAAAGTGGATATCAAACGTACGGTAGCTGCCCCTTCAGTTTT TATCTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTCT GTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGTAC AATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAAA GTGTTACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTC CACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTTA CGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTCACAAA ATCGTTTAACCGCGGTGAGTGT
523	ATX-P-603	LC Kappa – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCAG GGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAGCA GCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCCCA GGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCCAG ACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCACCA TCAGCAGACTGGAGCCTGAAGATTTTGCAGTGTATTACTGTCAGCA TTATGGTAACTCACCGCTCACTTTCGGCGGAGGGACCAAGGTGGA GATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCG TCTGACGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGC TGAATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCG ACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGC AGGATTCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACT GAGCAAAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGT GACGCACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCG CGGTGAGTGT
524	ATX-P-608	LC Kappa – nucleotide	GAAATAGTGATGACGCAGTCTCCAGCCACCCTGTCTGTGTCTCCAG GGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAGCA GCAACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCCCAGGC TCCTCATCTATGGTGCATCCACCAGGGCCACTGGTATCCCAGTCAG GTTCAGTGGCAGTGGGTCTGGGACACAGTTCACTCTCACCATCAGC AGCCTGCAGTCTGAAGATTTTGCAGTTTATTATTGTCAGCAATATG ATAACTGGCGGACGTTCGGCCAAGGGACACGACTGGAGATTAAAC GTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAATAAT TTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAATGCT TTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGATTCT AAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCAAAG CCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGAGT GT
525	ATX-P-609	LC Kappa – nucleotide	GAAATAGTGATGACGCAGTCTCCAGCCACCCTGTCTGTGTCTCCAG GGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAGCA GCAACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCCCAGGC TCCTCATCTATGGTGCATCCACCAGGGCCACTGGTATCCCAGTCAG GTTCAGTGGCAGTGGGTCTGGGACACAGTTCACTCTCACCATCAGC AGCCTGCAGTCTGAAGATTTTGCAGTTTATTATTGTCAGCAATATG ATAACTGGCGGACGTTCGGCCAAGGGACCAAGCTGGAAATCAAAC GTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAATAAT TTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAATGCT TTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGATTCT AAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCAAAG CCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGAGT GT
526	ATX-P-563	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTCG GAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGAGTTTTGCCG

			GCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC TCCTGATATATGCTGCATCCACTTTGCAAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTA ACAGTTTCCCTCTCACTTTCGGCGGAGGGACCAAGGTGGAGATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
527	ATX-P-570	LC Kappa – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGG GCGAGAGGGCCACCATCAACTGCAAGTCCAGTCAGAGTGTTTTAT ACAGCTCCAACAATAAGAATTACTTAGCTTGGTACCACCAGAAAC CAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCCGGGA ATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGACAGA TTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTT TATTACTGTCAGCAATACTATAGTAGTCCTCGGACGTTCGGCCAAG GGACCAAGGTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTT TTATCTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTC TGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGTA CAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAA AGTGTTACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCT CCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTCACAA AATCGTTTAACCGCGGTGAGTGT
528	ATX-P-560	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNTAAWNWIRQSPSRGLE WLGRTYYRSKWYNDYAVSVKSRITINPDTSKNQFSLQLSSVTPQDTAI YYCASDNWNNGGPGFDPWGQGTLVTVSSASTKGPSVFPLAPSSKSTS GGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLS SVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPA PELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
529	ATX-P-561	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSRGLE WLGRTYYRSKWYNGYAVSMKSRITINPDTSKNQFSLQLNSVTPEDTA MYYCAREGVGATTGFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTS GGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLS SVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPA PELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
530	ATX-P-562	HC IgG1 Fc	QVQLQQSGPGLVKSSQTLSLTCAISGDTVSSNSAAWNWIRQSPSRGLE WLGRTFYRSRWSAAYAASVSSRITINPDTSKNQFSLQLTSVTPADTAV YYCAREGVGSSTGFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSG GTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSS VVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAP ELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF

			YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
531	ATX-P-566	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSRGLE WLGRTYYRSKWFNNYSVSVKSRIAINPDTSKNQFSLQLNSVTPEDTA VYYCARDLGELLDWYFDLWGRGTLVTVSAASTKGPSVFPLAPSSKST SGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSL SSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCP APELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWY VDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKV SNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKG FYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQ QGNVFSCSVMHEALHNHYTQKSLSLSPG
532	ATX-P-572	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSRGLE WLGMTYYRSKWYSVFAVSVKSRITINTDTSKNQFSLQLNSVTPEDTA VYYCAREGGIVGATPFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTS GGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLS SVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPA PELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
533	ATX-P-573	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSRGLE WLGRTYYRSKLYSDYAVSVKSRITINPDTSRNQFSLQLNSVTPEDTAV YYCAREGGYTYGYDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGG TAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSV VTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPE LLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD GVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSN KALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFY PSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG NVFSCSVMHEALHNHYTQKSLSLSPG
534	ATX-P-581	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNNAAWNWIRQSPSRGLE WLGRTYYRSKWYNAYAVSVKSRIIINPDTSRNQFSLQLNSVTPEDTA VYYCAREGGYIYGLDQWGQGTLVTVSSASTKGPSVFPLAPSSKSTSG GTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSS VVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAP ELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
535	ATX-P-587	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSRGLE WLGKTYYRSKWYNYYALSVKSRITINPDTSKNQFSLHLNSVTPEDTA VYYCARDGDYYLPSPFDLWGHGTMVTVSSASTKGPSVFPLAPSSKST SGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSL SSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCP APELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWY VDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKV SNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKG FYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQ QGNVFSCSVMHEALHNHYTQKSLSLSPG
536	ATX-P-592	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSRGLE WLGRTYYRSKWYSDYPLSVKSRITINPDTSKNQFSLQLNSVTPEDTAV YYCARDSGIVETTPFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSG GTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSS

			VVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAP ELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
537	ATX-P-594	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSASWNWIRQSPSRGLE WLGTTYYRSKWFNVYAVSVKSRITINPDTSKNQFSLHLNSVTPEDTAI YFCTRDRGDLLHWYFDLWGRGTLVTVSSASTKGPSVFPLAPSSKSTS GGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLS SVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPA PELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
538	ATX-P-595	HC IgG1 Fc	QVQLQQSGPGLVKPSQTLSLTCAISGDSVSSNSAAWNWIRQSPSRGLE WLGRTYYRSKWFNDYALSVKSRITINPDTSKNQFSLHLNSVTPEDTA VYYCAREPGIVAPGPFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTS GGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLS SVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPA PELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
539	ATX-P-604	HC IgG1 Fc	QVQLQQSGPGLVKPTQTLSLTCAISGDSVSSNSAAWNWIRQSPSRGLE WLGRTYYRSKWFNGYAVSVKSRITINPDASKNQFSLHLKSVTDEDTA VYYCATDRGELLHWYFDLWGRGTLVTVSSASTKGPSVFPLAPSSKST SGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSL SSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCP APELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWY VDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKV SNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKG FYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQ QGNVFSCSVMHEALHNHYTQKSLSLSPG
540	ATX-P-610	HC IgG1 Fc	QVQLQQSGPGLVKSSQTLSITCAISGDSVSSNSAAWNWIRQSPSRGLE WLGRTYYRSKWYNDYALSVKSRIIIKSDTSKNQFSLQLNSVTPEDTAV YYCAREPGIAAPGPFDYWGQGSLVTVSSASTKGPSVFPLAPSSKSTSG GTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSS VVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAP ELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVS NKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGF YPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ GNVFSCSVMHEALHNHYTQKSLSLSPG
541	ATX-P-560	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATTTCCGGGGACAGTGTCTCTA GCAACACTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAAGGACATACTACAGGTCCAAGTGGTATA ATGATTATGCAGTATCTGTGAAAAGTCGAATAACCATCAACCCAG ACACATCCAAGAACCAGTTCTCCCTGCAGTTGAGCTCTGTGACTCC CCAGGACACGGCTATATATTACTGTGCGAGCGATAACTGGAACAA CGGAGGCCCTGGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCAC CGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCC CCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGC

			CTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACA GTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCA ATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGT TCATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAA CCTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGT GATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTT GGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTC TAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACG TGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAA GATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAA GCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGT CAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
542	ATX-P-561	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAAGGACATACTACAGGTCCAAGTGGTATA ATGGTTATGCAGTCTCTATGAAAAGTCGAATAACCATCAACCCAG ACACATCCAAGAACCAGTTCTCCCTGCAGCTGAACTCTGTGACTCC CGAGGACACGGCTATGTATTATTGTGCAAGAGAGGGAGTGGGAGC TACTACAGGCTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGT CTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCG TCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTT GTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGT GGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAAT CATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTC ATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACC TTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGA TAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGT GGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGC CTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGAT TGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAA CCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTT ATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGG AGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCT CATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCA GCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACAT AATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
543	ATX-P-562	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGTCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACACTGTCTCTA GTAATAGTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAAGGACATTCTATAGGTCCAGGTGGTCTG CTGCTTATGCAGCGTCTGTGAGTAGTCGAATAACCATCAACCCAG ACACATCCAAGAACCAGTTCTCCCTGCAGCTGACCTCTGTGACTCC

			CGCGGACACGGCTGTGTATTACTGTGCAAGAGAGGGAGTAGGATC TTCTACAGGCTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTC TCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGT CCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTG TGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTG GGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATC ATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCA TCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTT CAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATA AAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTG GTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTC CCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTA GAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCC TCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATT GGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAA CCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTT ATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGG AGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCT CATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCA GCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACAT AATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
544	ATX-P-566	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAAGGACATACTACAGGTCCAAGTGGTTTA ATAATTATTCAGTTTCTGTGAAAAGTCGAATAGCCATTAACCCAGA CACATCCAAGAACCAGTTCTCCCTTCAACTGAACTCTGTGACTCCC GAGGACACGGCTGTGTATTACTGTGCAAGAGATCTGGGGGAGTTA CTTGACTGGTACTTCGATCTCTGGGGCCGTGGCACCCTGGTCACTG TCTCCGCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCC GTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCT TGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGT GGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAAT CATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTC ATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACC TTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGA TAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGT GGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGC CTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGAT TGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAA CCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTT ATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGG AGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCT CATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCA GCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACAT AATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
545	ATX-P-572	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA

			GCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAATGACATACTACAGGTCCAAGTGGTATA GTGTTTTTGCAGTATCTGTGAAAAGTCGAATAACCATCAATACAGA CACATCCAAGAACCAGTTCTCCCTGCAGCTGAACTCTGTGACTCCC GAGGACACGGCTGTGTATTACTGTGCAAGAGAGGGGGGTATAGTG GGAGCCACCCCCTTTGACTACTGGGGCCAGGGAACCCTGGTCACC GTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCC CGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCC TTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAG TGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAA TCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTT CATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAAC CTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTG ATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTG GTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCT AATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGT GTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAG CACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTC AACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
546	ATX-P-573	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGCAGGACATACTACAGGTCCAAGTTGTATA GTGATTATGCAGTATCTGTGAAAAGTCGAATAACCATCAACCCAG ACACATCCAGGAACCAGTTCTCCCTGCAGCTGAACTCTGTGACTCC CGAGGACACGGCTGTGTATTACTGTGCAAGAGAGGGGGGATACAC CTATGGTTATGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCC TCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCA GCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGA AAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGG CGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATC GGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCG CTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTTCA AATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAA ACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGAT CAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCA CGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGA GGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTC GACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGG CTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTT CCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCA AGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATG ACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATC CTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGA ATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCTCAT TTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCAGCA

			GGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAAT CACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
547	ATX-P-581	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GCAACAATGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAAGGACGTACTACAGGTCCAAGTGGTATA ATGCTTATGCAGTTTCTGTGAAAAGTCGAATTATCATCAATCCAGA CACATCCAGGAACCAGTTCTCCCTGCAACTGAACTCTGTGACTCCC GAGGACACGGCTGTGTATTACTGTGCAAGAGAGGGTGGATACATC TATGGTCTTGACCAATGGGGCCAGGGAACCCTGGTCACCGTCTCCT CAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAG CAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAA AGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGC GCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCG GGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGC TGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAA ATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAA CTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCC CAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATC AGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAG GTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCG ACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGC TTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTC CGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAA GAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAATGAC TAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCT AGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAAT AATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTT TTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGG GCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCA CTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
548	ATX-P-587	HC IgG1 Fc – nucleotide	CAGGTGCAGCTGCAGCAGTCGGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAAAGACATACTACAGGTCCAAGTGGTATA ATTATTATGCACTATCTGTGAAAAGTCGAATAACCATCAACCCAG ACACATCCAAGAACCAGTTCTCCCTGCACCTGAACTCTGTGACTCC CGAGGACACGGCTGTGTATTACTGTGCAAGAGACGGTGACTACTA CCTTCCCTCTCCTTTTGATCTCTGGGGCCACGGGACAATGGTCACC GTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCC CGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCC TTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAG TGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAA TCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTT CATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAAC CTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTG ATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTG GTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCT AATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGT GTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAG CACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTC AACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG

			AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
549	ATX-P-592	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAAGGACATACTACAGGTCCAAGTGGTATA GTGATTATCCACTATCTGTGAAAAGTCGAATAACCATCAACCCCG ACACATCCAAGAACCAGTTCTCCCTGCAGCTGAACTCTGTGACTCC CGAGGACACGGCTGTGTATTACTGTGCAAGAGACTCCGGTATAGT TGAAACCACGCCCTTTGACTATTGGGGCCAGGGAACCCTGGTCAC CGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCC CCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGC CTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACA GTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCA ATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGT TCATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAA CCTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGT GATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTT GGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTC TAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACG TGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAA GATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAA GCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGT CAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
550	ATX-P-594	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GTAACAGTGCTTCTTGGAACTGGATCAGGCAGTCCCCTTCGAGAG GCCTTGAGTGGCTGGGAACGACATACTACAGGTCCAAGTGGTTTA ATGTTTATGCAGTCTCTGTGAAAAGTCGAATAACCATCAACCCAG ACACATCCAAGAACCAATTCTCCCTGCACCTGAACTCTGTGACTCC CGAGGACACGGCTATATATTTCTGTACAAGAGATCGGGGGGACCT ACTCCACTGGTACTTCGATCTCTGGGGCCGTGGCACCCTGGTCACT GTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCC CGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCC TTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAG TGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAA TCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTT CATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAAC CTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTG ATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTG GTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCT AATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGT GTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC

			GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAG CACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTC AACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
551	ATX-P-595	HC IgG1 Fc -- nucleotide	CAGGTACAGCTGCAGCAGTCGGGTCCAGGACTGGTGAAGCCCTCG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAAGGACATACTACAGGTCCAAGTGGTTTA ATGATTATGCACTATCTGTGAAAAGTCGAATAACCATCAACCCAG ACACATCCAAGAACCAGTTCTCCCTGCACCTGAACTCTGTGACTCC CGAGGACACGGCTGTGTATTACTGTGCAAGAGAACCTGGTATAGT AGCACCTGGCCCTTTTGACTACTGGGGCCAGGGAACCCTGGTCAC CGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCC CCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGC CTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACA GTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCA ATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGT TCATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAA CCTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGT GATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTT GGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTC TAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACG TGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAA GATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAA GCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGT CAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
552	ATX-P-604	HC IgG1 Fc -- nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGCCCACG CAGACCCTCTCACTCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GCAACAGTGCTGCATGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGGAGGACATACTACAGGTCCAAGTGGTTTA ATGGTTATGCAGTATCTGTGAAAAGTCGAATAACCATCAACCCCG ACGCATCCAAGAACCAGTTCTCCCTGCACTTGAAGTCTGTGACTGA CGAGGACACGGCTGTATATTACTGTGCAACAGATCGGGGGGAACT CCTCCACTGGTACTTCGATCTCTGGGGCCGTGGCACCCTGGTCACC GTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCC CGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCC TTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAG TGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAA TCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTT CATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAAC CTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTG ATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTG

			GTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCT AATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGT GTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAG CACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTC AACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
553	ATX-P-610	HC IgG1 Fc – nucleotide	CAGGTACAGCTGCAGCAGTCAGGTCCAGGACTGGTGAAGTCCTCG CAGACCCTCTCAATCACCTGTGCCATCTCCGGGGACAGTGTCTCTA GCAACAGTGCTGCTTGGAACTGGATCAGGCAGTCCCCATCGAGAG GCCTTGAGTGGCTGGGAAGGACATACTACAGGTCCAAGTGGTATA ATGATTATGCACTATCTGTGAAAAGTCGAATAATCATCAAGTCAG ACACATCCAAGAACCAGTTCTCCCTGCAGTTGAACTCTGTGACTCC CGAGGACACGGCTGTGTACTACTGTGCAAGAGAACCGGGTATAGC AGCACCTGGTCCATTTGACTACTGGGGCCAGGGATCCCTGGTCACC GTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCC CGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCC TTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAG TGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAA TCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTT CATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAAC CTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTG ATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTG GTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCT AATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGT GTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAG CACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTC AACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGG AAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTT TTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGCCG GAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCGACGGC TCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATCACGGTGGC AGCAGGGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACA TAATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
554	ATX-P-560	LC Kappa	DIQMTQSPSSVSTSVGDRVTITCRASQGISSWLAWYQQKPGKAPKLLI SAASSLQSGVPSRFSGSGSGTDFTLTISTLQPEDFASYYCQQANSFPPTF GQGTRVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
555	ATX-P-561	LC Kappa	DIQMTQSPSSLSASVGDRVTITCRASQGISSWLTWYQQKPGKAPKLLI YAASSLQGGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQANSFPPT FGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
556	ATX-P-562	LC Kappa	DIQMTQSPSSVSASIGDRVTITCRASKGISIWLAWYQQKPGKAPKVLIS AASSLQSGAPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQANSFPPTF

			GQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
557	ATX-P-566	LC Kappa	EIVLTQSPGTLSLSPGDRATLSCRASQSVRNSYVAWYQQKPGQAPRLL IYGASSRATGIPDRFSGSGSGTDFSLTIGRLEPEDFVVYYCQQYGNSPL TFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREA KVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHK VYACEVTHQGLSSPVTKSFNRGEC
558	ATX-P-572	LC Kappa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPG QPPKLLIYWASPRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQ QYYSIPRTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNN FYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKAD YEKHKVYACEVTHQGLSSPVTKSFNRGEC
559	ATX-P-573	LC Kappa	DIQMTQSPSSVSASVGDRVTITCRASQGISSWLAWYQQKPGKAPKVLI YAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQANSFPPT FGPGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
560	ATX-P-581	LC Kappa	DIQMTQSPSSVSASVGDRVTITCRASQGVNNWLAWYQQKPGKAPKL LIHAASSLLSGVPSRFSGSGSGTDFTLTITSLQPEDFATYYCQQANSFPI TFGQGTRLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAK VQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKV YACEVTHQGLSSPVTKSFNRGEC
561	ATX-P-587	LC Kappa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPG QPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQ QYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNN FYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKAD YEKHKVYACEVTHQGLSSPVTKSFNRGEC
562	ATX-P-592	LC Kappa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPG QPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQ QYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNN FYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKAD YEKHKVYACEVTHQGLSSPVTKSFNRGEC
563	ATX-P-594	LC Kappa	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQSPRLLI YGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQQYGRSVTF GGGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
564	ATX-P-595	LC Kappa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPG QPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQ QYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNN FYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKAD YEKHKVYACEVTHQGLSSPVTKSFNRGEC
565	ATX-P-604	LC Kappa	EIVLTQSPDTLSLSPGERATLSCRASQTIRSSYLAWYQLKPGQAPRLLI YGASSRATGIPDRFSGSGSGTDFTLSISRLEPEDFAVYYCQQYGRSIIFG GGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQ WKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYA CEVTHQGLSSPVTKSFNRGEC
566	ATX-P-610	LC Kappa	DIQMTQSPSSVSASVGDRVTITCRASQGISSWLAWYQQKPGKAPKLLI YAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQNYRTPIT FGQGTRLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKV QWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVY ACEVTHQGLSSPVTKSFNRGEC
567	ATX-P-560	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTACATCTGTTG GAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCA

			GCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC TCCTGATCTCTGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC ACCCTGCAGCCTGAAGACTTTGCATCTTACTATTGTCAACAGGCTA ACAGTTTCCCTCCGACGTTCGGCCAAGGGACCAGGGTGGAAATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
568	ATX-P-561	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCCTGTCTGCATCTGTCG GAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCA GCTGGTTAACCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC TCCTGATCTATGCTGCATCCAGTTTGCAAGGTGGGGTCCCATCAAG ATTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTA ACAGTTTCCCTCCGACGTTCGGCCAAGGGACCAAGGTGGAAATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
569	ATX-P-562	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTATAG GAGACAGAGTCACCATCACTTGTCGGGCGAGTAAGGGAATTAGCA TCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGG TCCTGATCTCTGCTGCATCCAGTTTGCAAAGTGGGGCCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTA ACAGTTTCCCTCCGACGTTCGGCCAAGGGACCAAGGTGGAGATCA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT
570	ATX-P-566	LC Kappa – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCAG GGGACAGAGCCACCCTCTCATGCAGGGCCAGTCAGAGTGTTAGGA ACAGTTACGTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCCCA GGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCCAG ACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCAGTCTCACCA TCGGCAGACTGGAGCCTGAGGATTTTGTAGTGTATTATTGTCAGCA ATACGGTAACTCACCTCTCACTTTCGGCGGAGGGACCAAGGTGGA GATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCG TCTGACGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGC TGAATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCG ACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGC AGGATTCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACT GAGCAAAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGT

			GACGCACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCG CGGTGAGTGT
571	ATX-P-572	LC Kappa – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGG GCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTAT ACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGAAAC CTGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTCCCCGGGA ATCCGGGGTCCCTGACCGGTTCAGTGGCAGCGGGTCTGGGACAGA TTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTT TATTATTGTCAGCAATATTATAGTATTCCTCGGACGTTCGGCCAAG GGACCAAGGTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTT TTATCTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTC TGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGTA CAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAA AGTGTTACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCT CCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTCACAA AATCGTTTAACCGCGGTGAGTGT
572	ATX-P-573	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCA GCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGG TCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTA ACAGTTTCCCTCCCACTTTCGGCCCTGGGACCAAAGTGGATATCAA ACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGAC GAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAATA ATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAATG CTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGATT CTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCAA AGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCA CCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGA GTGT
573	ATX-P-581	LC Kappa – nucleotide	GACATCCAGATGACTCAGTCTCCATCTTCCGTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTGTTAACA ACTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC TCCTGATCCATGCTGCATCCAGTTTGCTAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGATTTCACGCTCACCATCAC CAGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCT AACAGTTTCCCCATCACCTTCGGCCAAGGGACACGACTGGAAATT AAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTG ACGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAA TAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAA TGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGA TTCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGC AAAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACG CACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
574	ATX-P-587	LC Kappa – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGG GCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTAT ACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGAAAC CAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCCGGGA ATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGACAGA TTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTT TATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGGCCAGG GGACCAAGCTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTT TTATCTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTC

			TGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGTA CAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAA AGTGTTACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCT CCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTCACAA AATCGTTTAACCGCGGTGAGTGT
575	ATX-P-592	LC Kappa – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGG GCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTAT ACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGAAAC CAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACCGGG AATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGACAG ATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGT TTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGGCCAG GGGACCAAGCTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTT TTTATCTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGT ACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCACAGGA AAGTGTTACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAG CTCCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTCAC AAAATCGTTTAACCGCGGTGAGTGT
576	ATX-P-594	LC Kappa – nucleotide	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCAG GGGAGAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAGCA GCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCAGTCTCCCA GGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCCAG ACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCACCA TCAGCAGACTGGAGCCTGAGGATTTTGCAGTATATTACTGTCAGCA GTATGGTAGGTCAGTCACTTTCGGCGGAGGGACCAAGCTGGAAAT CAAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCT GACGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACA ATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGG ATTCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAG CAAAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGAC GCACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGG TGAGTGT
577	ATX-P-595	LC Kappa – nucleotide	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTGG GCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTTAT ACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGAAAC CAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCCGGGA ATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGACAGA TTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGGCAGTT TATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGGCCAGG GGACCAAGCTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTT TTATCTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTC TGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGTA CAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAA AGTGTTACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCT CCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTCACAA AATCGTTTAACCGCGGTGAGTGT
578	ATX-P-604	LC Kappa – nucleotide	GAAATAGTGCTGACTCAGTCTCCAGACACCCTATCTTTGTCTCCAG GGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGACTATTAGGA GCAGCTACTTAGCCTGGTACCAGCTGAAACCTGGCCAGGCTCCCA GGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCCAG ACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCTCCAT

			CAGCAGACTGGAGCCTGAAGATTTTGCAGTGTATTACTGTCAACA GTATGGCCGCTCAATCATTTTCGGCGGAGGGACCAAAGTGGAAAT CAAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCT GACGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACA ATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGG ATTCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAG CAAAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGAC GCACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGG TGAGTGT
579	ATX-P-610	LC Kappa – nucleotide	GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAG GAGACAGAGTCACCATCACTTGTCGGGCGAGTCAGGGTATTAGCA GCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTAAGC TCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATCAAG GTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC AGCCTGCAGCCTGAAGATTTTGCAACTTACTACTGTCAACAGAATT ACAGAACCCCGATCACCTTCGGCCAAGGGACACGACTGGAGATTA AACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGACAAT GCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGGAGCAGGAT TCTAAAGATTCCACATATTCACTCAGCTCCACCCTTACACTGAGCA AAGCCGACTATGAAAAACATAAAGTTTACGCATGTGAGGTGACGC ACCAAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTG AGTGT

[00211] Human complement factor H-related protein 4b (CFHR4b) (see, e.g., UniProt Accession No. Q92496):

MLLLINVILTLWVSCANGQEVKPCDFPEIQHGGLYYKSLRRLYFPAAAGQSYSYYCDQN
FVTPSGSYWDYIHCTQDGWSPTVPCLRTCSKSDIEIENGFISESSSIYILNKEIQYKCKPGY
ATADGNSSGSITCLQNGWSAQPICIKFCDMPVFENSRAKSNGMRFKLHDTLDYECYDGY
EISYGNTTGSIVCGEDGWSHFPTCYNSSEKCGPPPPISNGDTTSFLLKVYVPQSRVEYQCQ
SYYELQGSNYVTCSNGEWSEPPRCIHPCIITEENMNKNNIQLKGKSDIKYYAKTGDTIEF
MCKLGYNANTSVLSFQAVCREGIVEYPRCE (SEQ ID NO: 580).

[00212] Human CFHL1-Y402H-His (ATX-P-421):

MYRMQLLSCIALSLALVTNSEDCNELPPRRNTEILTGSWSDQTYPEGTQAIYKCRPGYRS
LGNVIMVCRKGEWVALNPLRKCQKRPCGHPGDTPFGTFTLTGGNVFEYGVKAVYTCN
EGYQLLGEINYRECDTDGWTNDIPICEVVKCLPVTAPENGKIVSSAMEPDREYHFGQAV
RFVCNSGYKIEGDEEMHCSDDGFWSKEKPKCVEISCKSPDVINGSPISQKIIYKENERFQY
KCNMGYEYSERGDAVCTESGWRPLPSCEEKSCDNPYIPNGDYSPLRIKHRTGDEITYQC
RNGFYPATRGNTAKCTSTGWIPAPRCTLKPCDYPDIKHGGLYHENMRRPYFPVAVGKY
YSYYCDEHFETPSGSYWDHIHCTQDGWSPAVPCLRKCYFPYLENGYNQNHGRKFVQG

KSIDVACHPGYALPKAQTTVTCMENGWSPTPRCIRVSFTLGGGGSGLNDIFEAQKIEWH EGGGGSHHHHHH (SEQ ID NO: 581).

[00213] Table 6: Anti-C3 antibodies (CDR sequences)

SEQ ID NO:	Antibody Name:	Descriptor:	Sequence:
VH Family: IGHV-1,3,5,7			
582	-	HCDR1 Consensus	$X_1YX_2X_3X_4$ (X_1 is G, S, N, D, T, or A; X_2 is Y, A, G, W, or T; X_3 is L, M, I, or V; X_4 is H, N, S, or G)
583	ATX-P-3369	HCDR1	GYYLH
584	ATX-P-3396	HCDR1	GYYMH
585	ATX-P-3413	HCDR1	GYYMH
586	ATX-P-3418	HCDR1	SYAMN
587	ATX-P-3419	HCDR1	SYGIS
588	ATX-P-3426	HCDR1	SYWIG
589	ATX-P-3428	HCDR1	GYGIS
590	ATX-P-3431	HCDR1	NYWIG
591	ATX-P-3432	HCDR1	DYYMH
592	ATX-P-3433	HCDR1	DYYMH
593	ATX-P-3435	HCDR1	NYGIS
594	ATX-P-3440	HCDR1	TYGIS
595	ATX-P-3452	HCDR1	GYYMN
596	ATX-P-3454	HCDR1	NYAVN
597	ATX-P-3458	HCDR1	GYYLH
598	ATX-P-3466	HCDR1	SYTMN
599	ATX-P-3469	HCDR1	AYAIH
600	ATX-P-3470	HCDR1	SYTMN
601	-	HCDR2 Consensus	$X_1IX_2X_3X_4X_5X_6X_7X_8X_9X_{10}X_{11}X_{12}X_{13}X_{14}X_{15}$ (X_1 is W, I, or V; X_2 is N, S, or Y; X_3 is P, T, A, G, or Y; X_4 is N, Y, G, D, H, or A; X_5 is S, T, N, G, or D; X_6 is G, or S; X_7 is D, G, T, N, V, A, or H; X_8 is T, P, or K; X_9 is N, Y, T, H, R, I, D, or K; X_{10} is Y, or A; X_{11} is V, Q, A, or S; X_{12} is Q, K, P, or D; X_{13} is N, F, K, G, S, or Q; X_{14} is F, Q, L, or V; X_{15} is Q, G, T, or K)
602	ATX-P-3369	HCDR2	WINPNSGDTNYVQNFQG
603	ATX-P-3396	HCDR2	WINPNSGGTYAQKFQG
604	ATX-P-3413	HCDR2	WINPNSGGTTYAQKFQG
605	ATX-P-3418	HCDR2	WINTNTGTPTYAQGFTG
606	ATX-P-3419	HCDR2	WISAYNGNTHYAQNLQG
607	ATX-P-3426	HCDR2	IIYPGDSDTRYSPSFQG
608	ATX-P-3428	HCDR2	WISAYNGNTHYAQNLQG
609	ATX-P-3431	HCDR2	IIYPGDSDTIYSPSFQG
610	ATX-P-3432	HCDR2	WINPNSGVTYYAQKFQG
611	ATX-P-3433	HCDR2	WINPNNGGTDYAQKFQG
612	ATX-P-3435	HCDR2	WISAYNGNTHYAQKLQG
613	ATX-P-3440	HCDR2	WISAYSGNTNYAQKLQG
614	ATX-P-3452	HCDR2	WINPNSGATNYAQKFQG
615	ATX-P-3454	HCDR2	WINTNTGHPTYAQGFTG
616	ATX-P-3458	HCDR2	WINPHSGGTIYAQKFQD
617	ATX-P-3466	HCDR2	WINTATGTPTYAQGFTG
618	ATX-P-3469	HCDR2	VISYDGSNKKYADSVKG
619	ATX-P-3470	HCDR2	WINTNTGTPTYAQGFTG
620	ATX-P-3369	HCDR3	SYVDTSSSAFDI

621	ATX-P-3396	HCDR3	ERGDYDGDAFDI
622	ATX-P-3413	HCDR3	EAGGSGEYFQH
623	ATX-P-3418	HCDR3	HSTSFDY
624	ATX-P-3419	HCDR3	SIAALDF
625	ATX-P-3426	HCDR3	HDYFDIGGYFDY
626	ATX-P-3428	HCDR3	AGLGIDY
627	ATX-P-3431	HCDR3	GRGYSGYEGAFDI
628	ATX-P-3432	HCDR3	DRTFYFDY
629	ATX-P-3433	HCDR3	GVYDVVVPTAIVNWFDP
630	ATX-P-3435	HCDR3	AAAAVDY
631	ATX-P-3440	HCDR3	ERVSNWVFDF
632	ATX-P-3452	HCDR3	DGAKWNHEGYYFDY
633	ATX-P-3454	HCDR3	DSSSWGY
634	ATX-P-3458	HCDR3	WNSGDSYYYYMDV
635	ATX-P-3466	HCDR3	YSGSHSFDY
636	ATX-P-3469	HCDR3	GLPFDY
637	ATX-P-3470	HCDR3	YTGNYSFDY
VH Family: IGHV3			
638	-	HCDR1 Consensus	$X_1X_2X_3MX_4$ (X_1 is D, N, S, or A; X_2 is Y, or A; X_3 is A, W, Y, S, C, D, or G; X_4 is H, S, or N)
639	ATX-P-3362	HCDR1	DYAMH
640	ATX-P-3366	HCDR1	NAWMS
641	ATX-P-3395	HCDR1	SYWMH
642	ATX-P-3397	HCDR1	NYYMN
643	ATX-P-3405	HCDR1	SYSMN
644	ATX-P-3407	HCDR1	SYCMN
645	ATX-P-3408	HCDR1	SYWMH
646	ATX-P-3410	HCDR1	AYDMH
647	ATX-P-3444	HCDR1	SYGMN
648	ATX-P-3463	HCDR1	SYAMH
649	ATX-P-3468	HCDR1	SYAMH
650	ATX-P-3471	HCDR1	SYAMS
651	-	HCDR2 Consensus	$X_1IX_2X_3X_4X_5X_6X_7X_8X_9X_{10}X_{11}X_{12}X_{13}X_{14}X_{15}$ (X_1 is G, R, N, S, H, T, V, or A; X_2 is S, K, N, or G; X_3 is W, S, Q, T, G, or Y; X_4 is N, K, D, S, A, or Y; X_5 is S, T, or G; X_6 is G, D, or S; X_7 is S, G, E, Y, T, or N; X_8 is I, G, T, K, or Y; X_9 is A, T, S, Y, or N; X_{10} is Y, T, P, or F; X_{11} is A, D, or V; X_{12} is D, Y, S, or A; X_{13} is S, A, or V; X_{14} is V, A, or K; X_{15} is K, P, Q, or G)
652	ATX-P-3362	HCDR2	GISWNSGSIAYADSVKG
653	ATX-P-3366	HCDR2	RIKSKTDGGTTDYAAPVKG
654	ATX-P-3395	HCDR2	RINSDGSSTSYADSVQG
655	ATX-P-3397	HCDR2	NIKQDGSEKYYVDSVKG
656	ATX-P-3405	HCDR2	SISSSSSYIYYADSVKG
657	ATX-P-3407	HCDR2	SINSDSSYIYYADSVKG
658	ATX-P-3408	HCDR2	HINSDGSSTNYADSVKG
659	ATX-P-3410	HCDR2	TIGTAGDTYYPDSVKG
660	ATX-P-3444	HCDR2	SISGYGSYIYYAASVKG
661	ATX-P-3463	HCDR2	VISYDGSNKYYADSVKG
662	ATX-P-3468	HCDR2	VISYDGSNKYYADSVKG
663	ATX-P-3471	HCDR2	AISGSGDSTYFADSVKG
664	ATX-P-3362	HCDR3	VAAAAGIPFFDY
665	ATX-P-3366	HCDR3	RYNSDFDY
666	ATX-P-3395	HCDR3	GQHLVQDY

667	ATX-P-3397	HCDR3	DGYYNFDAFDI
668	ATX-P-3405	HCDR3	EGYDNWNSACDI
669	ATX-P-3407	HCDR3	EGYYNWNGGNDY
670	ATX-P-3408	HCDR3	EGYWNGDTFDI
671	ATX-P-3410	HCDR3	GGSSSWYDWYFDL
672	ATX-P-3444	HCDR3	ELGGIYYGVGYFDL
673	ATX-P-3463	HCDR3	RGGYSYGPFEH
674	ATX-P-3468	HCDR3	RGNWNYGPFHY
675	ATX-P-3471	HCDR3	ILGYCSGTSCYGLFDN
VH Family: IGHV4-4			
676	-	HCDR1 Consensus	$X_1X_2X_3WWX_4$ (X_1 is I, S, R, N, or K; X_2 is N, D, S, or G; X_3 is N, S, T, D, Y, or H; X_4 is S, N, or T)
677	ATX-P-3360	HCDR1	INNWWS
678	ATX-P-3361	HCDR1	SNNWWS
679	ATX-P-3363	HCDR1	RDNWWS
680	ATX-P-3365	HCDR1	SNNWWS
681	ATX-P-3373	HCDR1	NDNWWS
682	ATX-P-3378	HCDR1	NDNWWS
683	ATX-P-3382	HCDR1	SNSWWN
684	ATX-P-3383	HCDR1	KDNWWT
685	ATX-P-3384	HCDR1	SDNWWN
686	ATX-P-3386	HCDR1	NDNWWS
687	ATX-P-3387	HCDR1	NDNWWN
688	ATX-P-3389	HCDR1	SSNWWS
689	ATX-P-3391	HCDR1	NDNWWS
690	ATX-P-3392	HCDR1	NDNWWS
691	ATX-P-3412	HCDR1	SSTWWS
692	ATX-P-3421	HCDR1	SNNWWS
693	ATX-P-3430	HCDR1	SSDWWS
694	ATX-P-3437	HCDR1	SNNWWS
695	ATX-P-3438	HCDR1	NDYWWN
696	ATX-P-3441	HCDR1	SGHWWS
697	ATX-P-3442	HCDR1	SSDWWS
698	ATX-P-3453	HCDR1	SNNWWS
699	ATX-P-3455	HCDR1	SDNWWS
700	ATX-P-3456	HCDR1	SNNWWS
701	ATX-P-3459	HCDR1	SDNWWN
702	ATX-P-3462	HCDR1	SNNWWS
703	ATX-P-3467	HCDR1	SDYWWS
704	ATX-P-3472	HCDR1	NDNWWS
705	-	HCDR2 Consensus	$X_1IX_2X_3SX_4X_5X_6X_7X_8NPSLX_9S$ (X_1 is K, Q, R, E, or D; X_2 is Y or F; X_3 is H or Q; X_4 is G, E, or R; X_5 is N, I, S, H, F, or T; X_6 is T or I; X_7 is D, N, or M; X_8 is Y or H; X_9 is K or R)
706	ATX-P-3360	HCDR2	KIYHSGNTDYNPSLKS
707	ATX-P-3361	HCDR2	QIYHSGITNYNPSLKS
708	ATX-P-3363	HCDR2	QIYQSGSTNYNPSLKS
709	ATX-P-3365	HCDR2	QIYHSGHTNYNPSLKS
710	ATX-P-3373	HCDR2	KIYHSEFTNYNPSLKS
711	ATX-P-3378	HCDR2	KIYHSEFTNYNPSLKS
712	ATX-P-3382	HCDR2	QIFHSGHTNYNPSLKS
713	ATX-P-3383	HCDR2	KIYHSGSTNYNPSLKS
714	ATX-P-3384	HCDR2	KIYHSGNTDYNPSLKS

715	ATX-P-3386	HCDR2	KIYHSGFTNYNPSLKS
716	ATX-P-3387	HCDR2	KIYHSGFTDYNPSLKS
717	ATX-P-3389	HCDR2	RIYHSGHTNYNPSLKS
718	ATX-P-3391	HCDR2	KIYHSEFTNYNPSLKS
719	ATX-P-3392	HCDR2	KIYHSEFTNYNPSLKS
720	ATX-P-3412	HCDR2	EIYHSGSTNYNPSLKS
721	ATX-P-3421	HCDR2	QIYHSENTNYNPSLKS
722	ATX-P-3430	HCDR2	EIYHSGSTNYNPSLKS
723	ATX-P-3437	HCDR2	EIYHSGNINYNPSLKS
724	ATX-P-3438	HCDR2	EIYHSGHTNYNPSLKS
725	ATX-P-3441	HCDR2	EIYHSGNTNYNPSLKS
726	ATX-P-3442	HCDR2	EIYHSRNTNYNPSLKS
727	ATX-P-3453	HCDR2	RIYHSGTTNYNPSLES
728	ATX-P-3455	HCDR2	EIYHSENTNYNPSLKS
729	ATX-P-3456	HCDR2	DIYHSGNTNYNPSLKS
730	ATX-P-3459	HCDR2	KIYHSGNTNYNPSLKS
731	ATX-P-3462	HCDR2	KIYQSGSTMYNPSLKS
732	ATX-P-3467	HCDR2	KIYHSGNTNHNPSLKS
733	ATX-P-3472	HCDR2	KIYHSEFTNYNPSLRS
734	ATX-P-3360	HCDR3	GSDYDFWSGYLDY
735	ATX-P-3361	HCDR3	AQWELRAGWFDP
736	ATX-P-3363	HCDR3	VYDWNYGGHFDY
737	ATX-P-3365	HCDR3	GATEILGYFDL
738	ATX-P-3373	HCDR3	EYHNFMDV
739	ATX-P-3378	HCDR3	EYENFMDV
740	ATX-P-3382	HCDR3	GGEYENSANWFDP
741	ATX-P-3383	HCDR3	GGDIAMEGDWFAP
742	ATX-P-3384	HCDR3	GGTETTGYMDV
743	ATX-P-3386	HCDR3	GGDNFMEGEGLGT
744	ATX-P-3387	HCDR3	GNHNYLWIGYLGT
745	ATX-P-3389	HCDR3	GRDLTGYFDY
746	ATX-P-3391	HCDR3	GVDFWSGSHMDV
747	ATX-P-3392	HCDR3	EGLELPHMDV
748	ATX-P-3412	HCDR3	SLYNWNDAAFDI
749	ATX-P-3421	HCDR3	VDDWNYGGHFDY
750	ATX-P-3430	HCDR3	GGHIGYYYMDV
751	ATX-P-3437	HCDR3	GGEYGDPVGYFDL
752	ATX-P-3438	HCDR3	GGTEITGYMDV
753	ATX-P-3441	HCDR3	GHYGDYVVYFDY
754	ATX-P-3442	HCDR3	GGVVADYYMDV
755	ATX-P-3453	HCDR3	GEEWELRGGVFDI
756	ATX-P-3455	HCDR3	GRELTGLFDY
757	ATX-P-3456	HCDR3	GGIAVTAYFDY
758	ATX-P-3459	HCDR3	GVDFWSGSHMDV
759	ATX-P-3462	HCDR3	DKPPLLGAFDY
760	ATX-P-3467	HCDR3	EGLELPHMDV
761	ATX-P-3472	HCDR3	EYQNYMDV
VH Family: IGHV4-5			
762	-	HCDR1 Consensus	$X_1YYX_2X_3$ (X_1 is S, or D; X_2 is W, or L; X_3 is S, or T)
763	ATX-P-3370	HCDR1	SYYWS
764	ATX-P-3371	HCDR1	SYYWS
765	ATX-P-3376	HCDR1	SYYWS
766	ATX-P-3420	HCDR1	DYYLT

767	ATX-P-3446	HCDR1	SYYWS
768	ATX-P-3449	HCDR1	SYYWS
769	ATX-P-3451	HCDR1	DYYWT
770	-	HCDR2 Consensus	$X_1X_2X_3X_4X_5GX_6TX_7YNPSLKS$ (X_1 is Y or E; X_2 is V or I; X_3 is Y or N; X_4 is Y or H; X_5 is S or I; X_6 is Y, F, or S; X_7 is N or K)
771	ATX-P-3370	HCDR2	YVYYSGYTKYNPSLKS
772	ATX-P-3371	HCDR2	YIYYSGFTKYNPSLNS
773	ATX-P-3376	HCDR2	YIYYSGFTKYNPSLKS
774	ATX-P-3420	HCDR2	EINHSGSTNYNPSLKS
775	ATX-P-3446	HCDR2	YVYYSGYTKYNPSLKS
776	ATX-P-3449	HCDR2	YIYYSGFTKYNPSLKS
777	ATX-P-3451	HCDR2	EVNHIGSTNYNPSLKS
778	ATX-P-3370	HCDR3	VESKWNYGPFDI
779	ATX-P-3371	HCDR3	REPRGRYNWNYGPFDI
780	ATX-P-3376	HCDR3	HPRGYNYGPFDY
781	ATX-P-3420	HCDR3	GSEDYYYYMDV
782	ATX-P-3446	HCDR3	VESKWNYGPFAI
783	ATX-P-3449	HCDR3	VDSKWNYGSFHI
784	ATX-P-3451	HCDR3	YSTSWYGWFDP
VH Family: IGHV4-6			
785	-	HCDR1 Consensus	$X_1X_2X_3YX_4WX_5$ (X_1 is S or N; X_2 is G or N; X_3 is S, K, R, N, or G; X_4 is Y, F, or N; X_5 is S or N)
786	ATX-P-3367	HCDR1	SGSYYWS
787	ATX-P-3375	HCDR1	SGKYFWS
788	ATX-P-3377	HCDR1	SGRYYWS
789	ATX-P-3436	HCDR1	SGSYYWS
790	ATX-P-3447	HCDR1	SGNYYWS
791	ATX-P-3448	HCDR1	SGGYNWN
792	ATX-P-3450	HCDR1	NNRYYWS
793	-	HCDR2 Consensus	$YIX_1X_2SGX_3TX_4YNPSLKX_5$ (X_1 is Y or N; X_2 is K, Y, or S; X_3 is F, S, Y, or N; X_4 is N, K, or Y; X_5 is S or N)
794	ATX-P-3367	HCDR2	YIYKSGFTNYNPSLKS
795	ATX-P-3375	HCDR2	YIYYSGSTNYNPSLKN
796	ATX-P-3377	HCDR2	YIYSSGYTNYNPSLKS
797	ATX-P-3436	HCDR2	YIYYSGSTKYNPSLKS
798	ATX-P-3447	HCDR2	YIYSSGSTNYNPSLKS
799	ATX-P-3448	HCDR2	YINYSGNTYYNPSLKS
800	ATX-P-3450	HCDR2	YIYYSGSTNYNPSLKS
801	ATX-P-3367	HCDR3	GGRGYSYGPFDY
802	ATX-P-3375	HCDR3	GGHNWNYAAFDI
803	ATX-P-3377	HCDR3	SRGYRYGPFDY
804	ATX-P-3436	HCDR3	DKGHWNYGAFDI
805	ATX-P-3447	HCDR3	SPRGYSYGPFAY
806	ATX-P-3448	HCDR3	GPLDTAMAPFDY
807	ATX-P-3450	HCDR3	DRPSRYKWNYDAFAI
VH Family: IGHV2			
808	-	HCDR1 Consensus	TSGVGVG
809	ATX-P-3406	HCDR1	TSGVGVG
810	ATX-P-3414	HCDR1	TSGVGVG
811	-	HCDR2 Consensus	$LIYWNX_1X_2X_3X_4YSPSLX_5S$

			(X_1 is G or D; X_2 is D or V; X_3 is E or K; X_4 is R or F; X_5 is K or Q)
812	ATX-P-3406	HCDR2	LIYWNGDERYSPSLKS
813	ATX-P-3414	HCDR2	LIYWNDVKFYSPSLQS
814	-	HCDR3 Consensus	$X_1X_2NWX_3YX_4AFDI$ (X_1 is S or G; X_2 is P or D; X_3 is G or N; X_4 is E or R)
815	ATX-P-3406	HCDR3	SPNWGYEAFDI
816	ATX-P-3414	HCDR3	GDNWNYRAFDI
VL Family: IGKV-1,6			
817	-	LCDR1 Consensus	$X_1ASQX_2X_3X_4X_5X_6X_7X_8$ (X_1 is R or Q; X_2 is D, N, T, G, or S; X_3 is V or I; X_4 is S, I, R, G, T, or K; X_5 is T, N, R, or S; X_6 is A, W, F, D, Y, N, or C; X_7 is V or L; X_8 is A, N, G, or H)
818	ATX-P-1899	LCDR1	RASQDVSTAVA
819	ATX-P-3395	LCDR1	RASQNIITWLA
820	ATX-P-3396	LCDR1	RASQNIITWLA
821	ATX-P-3397	LCDR1	RASQNIITWLA
822	ATX-P-3405	LCDR1	RASQNIITWLA
823	ATX-P-3406	LCDR1	RASQNIITWLA
824	ATX-P-3407	LCDR1	RASQNIITWLA
825	ATX-P-3408	LCDR1	RASQNIITWLA
826	ATX-P-3410	LCDR1	RASQNIITWLA
827	ATX-P-3412	LCDR1	RASQNIITWLA
828	ATX-P-3413	LCDR1	RASQNIITWLA
829	ATX-P-3414	LCDR1	RASQNIITWLA
830	ATX-P-3418	LCDR1	RASQTIRNFLN
831	ATX-P-3419	LCDR1	RASQGIRNDLG
832	ATX-P-3420	LCDR1	RASQSISRYLN
833	ATX-P-3428	LCDR1	RASQGIRNDLG
834	ATX-P-3430	LCDR1	RASQSISNYLN
835	ATX-P-3431	LCDR1	RASQSIGSNLH
836	ATX-P-3432	LCDR1	RASQGISSYLA
837	ATX-P-3433	LCDR1	RASQSITSYLN
838	ATX-P-3435	LCDR1	RASQGIRNDLG
839	ATX-P-3441	LCDR1	RASQSISSYLN
840	ATX-P-3442	LCDR1	RASQTIRSYLN
841	ATX-P-3448	LCDR1	QASQDISNYLN
842	ATX-P-3451	LCDR1	RASQDISNYLN
843	ATX-P-3454	LCDR1	QASQDIKNCLN
844	ATX-P-3458	LCDR1	RASQGISSWLA
845	ATX-P-3462	LCDR1	RASQSISSYLN
846	ATX-P-3466	LCDR1	RASQGISNYLA
847	ATX-P-3469	LCDR1	RASQGISNYLA
848	ATX-P-3470	LCDR1	RASQGISNYLA
849	-	LCDR2 Consensus	$X_1ASX_2X_3X_4X_5$ (X_1 is S, K, A, Y, T, D, or V; X_2 is F, S, N, Q, or T; X_3 is L, S, or F; X_4 is Y, E, Q, or F; X_5 is S or T)
850	ATX-P-1899	LCDR2	SASFLYS
851	ATX-P-3395	LCDR2	KASSLES
852	ATX-P-3396	LCDR2	KASSLES
853	ATX-P-3397	LCDR2	KASSLES
854	ATX-P-3405	LCDR2	KASSLES
855	ATX-P-3406	LCDR2	KASSLES
856	ATX-P-3407	LCDR2	KASSLES

857	ATX-P-3408	LCDR2	KASSLES
858	ATX-P-3410	LCDR2	KASSLES
859	ATX-P-3412	LCDR2	KASSLES
860	ATX-P-3413	LCDR2	KASSLES
861	ATX-P-3414	LCDR2	KASSLES
862	ATX-P-3418	LCDR2	AASSLQS
863	ATX-P-3419	LCDR2	AASSLQS
864	ATX-P-3420	LCDR2	AASSLQS
865	ATX-P-3428	LCDR2	AASNLQS
866	ATX-P-3430	LCDR2	AASSLQS
867	ATX-P-3431	LCDR2	YASQSFS
868	ATX-P-3432	LCDR2	TASTLQS
869	ATX-P-3433	LCDR2	AASSLQS
870	ATX-P-3435	LCDR2	AASSLQS
871	ATX-P-3441	LCDR2	AASSFQS
872	ATX-P-3442	LCDR2	AASSLQS
873	ATX-P-3448	LCDR2	DASNLET
874	ATX-P-3451	LCDR2	AASSLES
875	ATX-P-3454	LCDR2	DASNLET
876	ATX-P-3458	LCDR2	AASSLQS
877	ATX-P-3462	LCDR2	AASSLQS
878	ATX-P-3466	LCDR2	VASTLQS
879	ATX-P-3469	LCDR2	AASTLQS
880	ATX-P-3470	LCDR2	AASTLQS
881	ATX-P-1899	LCDR3	QQSYATLPT
882	ATX-P-3395	LCDR3	QQYSSYSYT
883	ATX-P-3396	LCDR3	QQYSSYSYT
884	ATX-P-3397	LCDR3	QQYSSYSYT
885	ATX-P-3405	LCDR3	QQYSSYSYT
886	ATX-P-3406	LCDR3	QQYSSYSYT
887	ATX-P-3407	LCDR3	QQYSSYSYT
888	ATX-P-3408	LCDR3	QQYSSYSYT
889	ATX-P-3410	LCDR3	QQYSSYSYT
890	ATX-P-3412	LCDR3	QQYSSYSYT
891	ATX-P-3413	LCDR3	QQYSSYSYT
892	ATX-P-3414	LCDR3	QQYSSYSYT
893	ATX-P-3418	LCDR3	QQTYSIPIT
894	ATX-P-3419	LCDR3	LQDYNYPWT
895	ATX-P-3420	LCDR3	QQSYSSPIT
896	ATX-P-3428	LCDR3	LQDYNWPWT
897	ATX-P-3430	LCDR3	QQSYSSPLT
898	ATX-P-3431	LCDR3	HQSSSLPRT
899	ATX-P-3432	LCDR3	QQLNGYPPT
900	ATX-P-3433	LCDR3	QQSYSTPLT
901	ATX-P-3435	LCDR3	LQDYNWPYT
902	ATX-P-3441	LCDR3	QQSYSNPYT
903	ATX-P-3442	LCDR3	QQSYTTPLT
904	ATX-P-3448	LCDR3	QQANSFPLT
905	ATX-P-3451	LCDR3	QQSYSTPT
906	ATX-P-3454	LCDR3	QQFDNLPLT
907	ATX-P-3458	LCDR3	QQANSFPLT
908	ATX-P-3462	LCDR3	QQSYSTPYT
909	ATX-P-3466	LCDR3	QNYISAPLT

910	ATX-P-3469	LCDR3	QKYISAPLT
911	ATX-P-3470	LCDR3	QDYTSAPLT
VL Family: IGKV2			
912	-	LCDR1 Consensus	RSSQX$_1$LLHX$_2$NGYNYLD (X$_1$ is S or I; X$_2$ is S or T)
913	ATX-P-3426	LCDR1	RSSQSLLHSNGYNYLD
914	ATX-P-3452	LCDR1	RSSQILLHTNGYNYLD
915	-	LCDR2 Consensus	LGSX$_1$RAS (X$_1$ is N or Y)
916	ATX-P-3426	LCDR2	LGSNRAS
917	ATX-P-3452	LCDR2	LGSYRAS
918	-	LCDR3 Consensus	MQX$_1$LQTPX$_2$T (X$_1$ is T or A; X$_2$ is P or L)
919	ATX-P-3426	LCDR3	MQTLQTPPT
920	ATX-P-3452	LCDR3	MQALQTPLT
VL Family: IGKV3			
921	-	LCDR1 Consensus	RASQSX$_1$X$_2$X$_3$X$_4$X$_5$X$_6$ (X$_1$ is V or I; X$_2$ is S or R; X$_3$ is S, D, or R; X$_4$ is Y or S; X$_5$ is L or Y; X$_6$ is A, F, or L)
922	ATX-P-3436	LCDR1	RASQSVSSYLA
923	ATX-P-3440	LCDR1	RASQSVRSSYFA
924	ATX-P-3444	LCDR1	RASQSISSSYLA
925	ATX-P-3446	LCDR1	RASQSVRSSYLA
926	ATX-P-3447	LCDR1	RASQSVSSSYLA
927	ATX-P-3449	LCDR1	RASQSVSSSYLA
928	ATX-P-3468	LCDR1	RASQSVSDSYLA
929	ATX-P-3471	LCDR1	RASQSVSRSYLA
930	-	LCDR2 Consensus	X$_1$ASX$_2$RAT (X$_1$ is D or G; X$_2$ is S or N)
931	ATX-P-3436	LCDR2	DASNRAT
932	ATX-P-3440	LCDR2	GASSRAT
933	ATX-P-3444	LCDR2	GASSRAT
934	ATX-P-3446	LCDR2	GASSRAT
935	ATX-P-3447	LCDR2	GASSRAT
936	ATX-P-3449	LCDR2	GASSRAT
937	ATX-P-3468	LCDR2	GASSRAT
938	ATX-P-3471	LCDR2	GASSRAT
939	-	LCDR3 Consensus	QQX$_1$X$_2$X$_3$X$_4$PX$_5$T (X$_1$ is R or Y; X$_2$ is S, G, or D; X$_3$ is N or S; X$_4$ is W or S; X$_5$ is L, R, I, Y, F, or W)
940	ATX-P-3436	LCDR3	QQRSNWPLT
941	ATX-P-3440	LCDR3	QQYGSSPRT
942	ATX-P-3444	LCDR3	QQYGSSPIT
943	ATX-P-3446	LCDR3	QQYGSSPYT
944	ATX-P-3447	LCDR3	QQYGSSPFT
945	ATX-P-3449	LCDR3	QQYGSSPYT
946	ATX-P-3468	LCDR3	QQYDSSPFT
947	ATX-P-3471	LCDR3	QQYGSSPWT
VL Family: IGKV4			
948	-	LCDR1 Consensus	KSSQX$_1$X$_2$LYX$_3$SNX$_4$KNYLA (X$_1$ is S or T; X$_2$ is V or I; X$_3$ is R or S; X$_4$ is N or I)
949	ATX-P-3360	LCDR1	KSSQSVLYSSNNKNYLA
950	ATX-P-3361	LCDR1	KSSQSVLYSSNNKNYLA
951	ATX-P-3362	LCDR1	KSSQSVLYSSNNKNYLA

952	ATX-P-3363	LCDR1	KSSQSVLYSSNNKNYLA
953	ATX-P-3365	LCDR1	KSSQSVLYSSNNKNYLA
954	ATX-P-3366	LCDR1	KSSQSVLYSSNNKNYLA
955	ATX-P-3367	LCDR1	KSSQSVLYSSNNKNYLA
956	ATX-P-3369	LCDR1	KSSQSVLYSSNNKNYLA
957	ATX-P-3370	LCDR1	KSSQSVLYSSNNKNYLA
958	ATX-P-3371	LCDR1	KSSQSVLYSSNNKNYLA
959	ATX-P-3373	LCDR1	KSSQSVLYSSNNKNYLA
960	ATX-P-3375	LCDR1	KSSQSVLYSSNNKNYLA
961	ATX-P-3376	LCDR1	KSSQSVLYSSNNKNYLA
962	ATX-P-3377	LCDR1	KSSQSVLYSSNNKNYLA
963	ATX-P-3378	LCDR1	KSSQSVLYSSNNKNYLA
964	ATX-P-3382	LCDR1	KSSQSVLYSSNNKNYLA
965	ATX-P-3383	LCDR1	KSSQSVLYSSNNKNYLA
966	ATX-P-3384	LCDR1	KSSQSVLYSSNNKNYLA
967	ATX-P-3386	LCDR1	KSSQSVLYSSNNKNYLA
968	ATX-P-3387	LCDR1	KSSQSVLYSSNNKNYLA
969	ATX-P-3389	LCDR1	KSSQSVLYSSNNKNYLA
970	ATX-P-3391	LCDR1	KSSQSVLYSSNNKNYLA
971	ATX-P-3392	LCDR1	KSSQSVLYSSNNKNYLA
972	ATX-P-3421	LCDR1	KSSQTVLYRSNNKNYLA
973	ATX-P-3437	LCDR1	KSSQSVLYSSNNKNYLA
974	ATX-P-3438	LCDR1	KSSQSVLYSSNNKNYLA
975	ATX-P-3450	LCDR1	KSSQSVLYSSNNKNYLA
976	ATX-P-3453	LCDR1	KSSQSVLYRSNNKNYLA
977	ATX-P-3455	LCDR1	KSSQTILYRSNIKNYLA
978	ATX-P-3456	LCDR1	KSSQSVLYSSNNKNYLA
979	ATX-P-3459	LCDR1	KSSQSVLYSSNNKNYLA
980	ATX-P-3463	LCDR1	KSSQSVLYSSNNKNYLA
981	ATX-P-3467	LCDR1	KSSQSVLYSSNNKNYLA
982	ATX-P-3472	LCDR1	KSSQSVLYSSNNKNYLA
983	-	LCDR2 Consensus	WASX$_1$RES (X_1 is N or T)
984	ATX-P-3360	LCDR2	WASNRES
985	ATX-P-3361	LCDR2	WASNRES
986	ATX-P-3362	LCDR2	WASNRES
987	ATX-P-3363	LCDR2	WASNRES
988	ATX-P-3365	LCDR2	WASNRES
989	ATX-P-3366	LCDR2	WASNRES
990	ATX-P-3367	LCDR2	WASNRES
991	ATX-P-3369	LCDR2	WASNRES
992	ATX-P-3370	LCDR2	WASNRES
993	ATX-P-3371	LCDR2	WASNRES
994	ATX-P-3373	LCDR2	WASNRES
995	ATX-P-3375	LCDR2	WASNRES
996	ATX-P-3376	LCDR2	WASNRES
997	ATX-P-3377	LCDR2	WASNRES
998	ATX-P-3378	LCDR2	WASNRES
999	ATX-P-3382	LCDR2	WASNRES
1000	ATX-P-3383	LCDR2	WASNRES
1001	ATX-P-3384	LCDR2	WASNRES
1002	ATX-P-3386	LCDR2	WASNRES
1003	ATX-P-3387	LCDR2	WASNRES
1004	ATX-P-3389	LCDR2	WASNRES

1005	ATX-P-3391	LCDR2	WASNRES
1006	ATX-P-3392	LCDR2	WASNRES
1007	ATX-P-3421	LCDR2	WASTRES
1008	ATX-P-3437	LCDR2	WASTRES
1009	ATX-P-3438	LCDR2	WASTRES
1010	ATX-P-3450	LCDR2	WASTRES
1011	ATX-P-3453	LCDR2	WASTRES
1012	ATX-P-3455	LCDR2	WASTRES
1013	ATX-P-3456	LCDR2	WASTRES
1014	ATX-P-3459	LCDR2	WASTRES
1015	ATX-P-3463	LCDR2	WASTRES
1016	ATX-P-3467	LCDR2	WASTRES
1017	ATX-P-3472	LCDR2	WASTRES
1018	-	LCDR3 Consensus	$QQX_1X_2X_3TX_4X_5$ (X_1 is Y or F; X_2 is Y or F; X_3 is S, G, or D; X_4 is P or R; X_5 is Y, W, R, T, or P)
1019	ATX-P-3360	LCDR3	QQYYSTPYT
1020	ATX-P-3361	LCDR3	QQYYSTPYT
1021	ATX-P-3362	LCDR3	QQYYSTPYT
1022	ATX-P-3363	LCDR3	QQYYSTPYT
1023	ATX-P-3365	LCDR3	QQYYSTPYT
1024	ATX-P-3366	LCDR3	QQYYSTPYT
1025	ATX-P-3367	LCDR3	QQYYSTPYT
1026	ATX-P-3369	LCDR3	QQYYSTPYT
1027	ATX-P-3370	LCDR3	QQYYSTPYT
1028	ATX-P-3371	LCDR3	QQYYSTPYT
1029	ATX-P-3373	LCDR3	QQYYSTPYT
1030	ATX-P-3375	LCDR3	QQYYSTPYT
1031	ATX-P-3376	LCDR3	QQYYS TPYT
1032	ATX-P-3377	LCDR3	QQYYSTPYT
1033	ATX-P-3378	LCDR3	QQYYSTPYT
1034	ATX-P-3382	LCDR3	QQYYSTPYT
1035	ATX-P-3383	LCDR3	QQYYSTPYT
1036	ATX-P-3384	LCDR3	QQYYSTPYT
1037	ATX-P-3386	LCDR3	QQYYSTPYT
1038	ATX-P-3387	LCDR3	QQYYSTPYT
1039	ATX-P-3389	LCDR3	QQYYSTPYT
1040	ATX-P-3391	LCDR3	QQYYSTPYT
1041	ATX-P-3392	LCDR3	QQYYSTPYT
1042	ATX-P-3421	LCDR3	QQYYSTPWT
1043	ATX-P-3437	LCDR3	QQYFGTPRT
1044	ATX-P-3438	LCDR3	QQYYSTPRT
1045	ATX-P-3450	LCDR3	QQYYSTPWT
1046	ATX-P-3453	LCDR3	QQYYGTPRT
1047	ATX-P-3455	LCDR3	QQYYSTRT
1048	ATX-P-3456	LCDR3	QQYYSTPRT
1049	ATX-P-3459	LCDR3	QQYYSTPPT
1050	ATX-P-3463	LCDR3	QQFYDTPRT
1051	ATX-P-3467	LCDR3	QQYYSTPWT
1052	ATX-P-3472	LCDR3	QQYYSTPYT

[00214] Table 7: Anti-C3 antibodies (VH sequences)

SEQ ID NO:	Antibody Name:	Descriptor:	Sequence:
1053	ATX-P-3360	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG CATTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGCTTGGAAAAATCTATCATAGTGGGAACACCGAC TACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAG TCCAAGAATCAGTTCTCCCTGAGGCTGAGTTCTGTGACCGCCGCG GACACGGCCGTATATTATTGTGCGAGCGGAAGCGATTACGATTTT TGGAGTGGTTATTTGGACTACTGGGGCCAGGGAACCCTGGTCACC GTCTCCTCA
1054	ATX-P-3362	VH nt	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCTGG CAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTTGAT GATTATGCCATGCACTGGGTCCGGCAAGCTCCAGGGAAGGGCCT GGAGTGGGTCTCAGGTATTAGTTGGAATAGTGGTAGCATAGCCTA TGCGGACTCTGTGAAGGGCCGATTCACCATCTCCAGAGACAACGC CAAGAACTCCCTGTATCTGCAAATGAACAGTCTGAGAGTTGAGG ACACGGCCTTTTTTTACTGTGCAAGAGTCGCAGCAGCAGCTGGTA TCCCTTTCTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCT CCTCA
1055	ATX-P-3363	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC TGGGACCCTGACCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAA CAGGGATAACTGGTGGAGTTGGGTCCGCCAGCCCCCGGGGAAGG GGCTGGAGTGGATTGGACAAATCTATCAGAGTGGGAGCACCAAC TACAACCCGTCCCTCAAGAGTCGGGTCACCATATCAGTCGACAAG TCCAAGAACCAGTTCTCCCTGAAGCTGAGTTCTGTGACCGCCGCG GACACGGCCGTATATTACTGTGCGAGAGTATATGACTGGAACTAC GGGGGTCACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTC TCCTCA
1056	ATX-P-3365	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCATCAG CAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGATTGGACAAATCTATCATAGTGGCCACACCAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCGGTTGACATGT CCAAGAACCAGTTCTCCCTGAAGCTGACCTCTGTGACCGCCGCGG ACACGGCCGTGTATTACTGTGCGAGGGGGGCTACAGAAATTCTG GGGTACTTCGATCTCTGGGGCCGTGGCACCCTGGTCACTGTCTCC TCA
1057	ATX-P-3367	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCGTCAG CAGTGGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCAGGGA AGGGACTGGAGTGGATTGGATATATCTATAAAAGTGGGTTCACC AATTACAACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTAGAC ACGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCT GCGGACACGGCCGTGTATTACTGTGCGATAGGGGGACGTGGATA CAGCTATGGTCCTTTTGACTACTGGGGCCAGGGAACCCTGGTCAC CGTCTCCTCA
1058	ATX-P-3369	VH nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCTTCAC CGGCTACTATTTACACTGGGTGCGACAGGCCCCTGGACAAGGACT TGAGTGGATGGGATGGATCAACCCTAACAGTGGTGACACAAACT ATGTACAGAACTTTCAGGGCAGGGTCACCATGACCAGGGACACG TCCATCAGCACAGCCTACATGGAGCTGAGCAGGCTGAGATCTGA CGACACGGCCGTGTATTACTGTGCGAGATCCTACGTGGATACCAG CTCGTCGGCTTTTGATATCTGGGGACAAGGGACAATGGTCACCGT CTCTTCA

1059	ATX-P-3370	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCATCAG TAGTTACTACTGGAGCTGGATCCGGCAGCCCCCCGGGAAGGGAC TGGAGTGGATTGGGTATGTCTATTACAGTGGGTACACCAAGTACA ACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGCCCA AGACCCAGTTCTCCCTGAAGATGAGCTCTGTGACCGCTGCGGACA CGGCCGTGTATTACTGTGCGAGCGTCGAATCAAAGTGGAACTACG GGCCTTTTGATATCTGGGGACAAGGGACAATGGTCACCGTCTCTT CA
1060	ATX-P-3371	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGACTCCATCAG TAGTTACTACTGGAGCTGGATCCGGCAGCCCCCAGGGAAGGGAC TGGAGTGGATTGGATATATCTATTACAGTGGGTTCACCAAGTACA ACCCCTCCCTCAACAGTCGAGTCACCATATCAGTAGACACGTCCA AGAGCCAGTTCTCCCTGAAGCTGACCTCTGTGACCGCTGCGGACA CGGCCGTGTATTACTGTGCGATGAGAGAGCCGAGAGGCCGGTAT AACTGGAACTACGGGCCTTTTGATATCTGGGGACAAGGGACAAT GGTCACCGTCTCTTCA
1061	ATX-P-3373	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG TAATGATAACTGGTGGAGTTGGGTCCGCCAGCCCCCCGGGAAGG GACTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTCACCAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGT CCAAGAACCAGTTCTCCCTGGAGCTGAACTCTGTGACCGCCGCGG ACACGGCCGTGTATTACTGTGCGAGAGAGTATCATAATTTCATGG ACGTCTGGTGCAAAGGGACCACGGTCACCGTCTCCTCA
1062	ATX-P-3375	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGACTCCGTCAG CAGTGGTAAATACTTCTGGAGCTGGATCCGGCAGTCCCCAGGGA AGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACC AACTACAACCCCTCCCTCAAGAATCGAGTCACCATATCGGTAGAC ACGTCCAAGAAGGAGTTGTCTCTGAAGCTGAGTTCTGTGACCGCT GCGGACACGGCCGTTTATTACTGTGCGAGAGGAGGGCATAACTG GAACTACGCTGCTTTTGATATCTGGGGACAAGGGACAATGGTCAC CGTCTCTTCA
1063	ATX-P-3378	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG TAATGATAACTGGTGGAGTTGGGTCCGCCAGTCCCCCGGGAAGG GGTTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTCACCAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGT CCAAGAACCAGTTCTCCCTGGAGCTGAGCTCTGTGGCCGCCGCGG ACACGGCCGTGTATTACTGTGCGAGAGAGTATGAGAACTTCATGG ACGTCTGGGGCAAGGGGACCACGGTCACCGTCTCCTCA
1064	ATX-P-3382	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCATCAG CAGTAATAGCTGGTGGAATTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGATTGGGCAAATCTTTCATAGTGGACACACCAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATGTCTATAGACAAGT CCAAGAACCAGTTCTCCCTGAAACTGACCTCTGTGACCGCCGCGG ACACGGCCCTGTATTACTGTGCGAGAGGAGGGGAGTATGAAAAC TCGGCGAACTGGTTCGACCCCTGGGGCCAAGGAACCCTGGTCACC GTCTCTTCA
1065	ATX-P-3383	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGTCTCCATCAA CAAGGATAACTGGTGGACTTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGATTGGGAAAATCTATCATAGTGGGAGCACCAAC

			TACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAC TCCAAGAACCAATTCTCCCTGAAGCTGAACTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTACGAGAGGGGGGGATATAGCTAT GGAGGGGGACTGGTTCGCCCCCTGGGGCCAGGGAACCCTGGTCA CCGTCTCCTCA
1066	ATX-P-3384	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG CAGTGATAACTGGTGGAATTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGCTTGGAAAAATCTATCATAGTGGGAACACCGAC TACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAG TCCAAGAATCAGTTCTCCCTGAGGCTGAGTTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGAGAGGTGGAACTGAAACTAC GGGGTACATGGACGTCTGGGGCAAAGGGACCACGGTCACCGTCT CCTCA
1067	ATX-P-3386	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG CAATGATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAATGGATTGGGAAAATCTATCATAGTGGGTTCACCAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGT CCAAGAACCAGTTCTCCCTGAAGCTGAACTCTGTGACCGCCGCGG ACACGGCCGTGTATTACTGTGCGAGAGGGGGGGATAACTTTATG GAGGGGGAGGGGTTAGGGACCTGGGGCCCGGGAACCCTGGTCAC CGTCTCCTCA
1068	ATX-P-3387	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG CAATGATAACTGGTGGAATTGGGTCCGCCAGTCCCCAGGGAAGG GGCTGGAGTGGATTGGAAAAATCTATCATAGTGGGTTCACCGACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGT CCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCCGCGG ACACGGCCGTGTATTATTGTGCGAGAGGAAACCATAACTATTTGT GGATTGGGTATTTGGGGACCTGGGGCCCGGGAACCCTGGTCACC GTCTCCTCA
1069	ATX-P-3389	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCATCTGCGCTGTCTCTGGTGGCTCCATCAG TAGTAGTAATTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGATTGGGAGAATCTATCATAGTGGGCACACCAAC TACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAG TCCAAGAACCAGTTCTCCCTGAAGCTGACCTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGAGAGGGAGGGACTTAACTGG ATACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTC A
1070	ATX-P-3391	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAACCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG TAATGATAACTGGTGGAGTTGGGTCCGCCAGTCCCCCGGGAAGG GGCTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTCACCAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGT CCAAGAACCAGTTCTCCCTGGAGCTGAGCTCTGTGACCGCCGCGG ACACGGCCGTATATTACTGTGCGAGAGGGGTCGATTTTTGGAGTG GTTCCCACATGGACGTCTGGGGCAAAGGGACCACGGTCACCGTCT CCTCA
1071	ATX-P-3392	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG TAATGATAACTGGTGGAGTTGGGTCCGCCAGTCCCCCGGGAAGG GGCTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTCACCAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGT CTAAGAACCAGTTTTCCCTGGAACTGAGCTCTGTGACCGCCGCGG

			ACACGGCCGTGTATTTCTGTGCGCGAGAAGGACTGGAACTACCCC ACATGGACGTCTGGGGCAAAGGGACCACGGTCACCGTCTCCTCA
1072	ATX-P-3395	VH nt	GAGGTGCAGCTGGTGGAGTCCGGGGGAGGCGTGGTCAAGCCTGG GGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAG TAGCTACTGGATGCACTGGGTCCGCCAAGCTCCAGGGAAGGGGC TGGTGTGGGTCTCACGTATTAATAGTGATGGAAGTAGCACAAGCT ACGCGGACTCCGTGCAGGGCCGATTCACCATCTCCAGAGACATCG CCAAGAACACGCTGTATCTGCAAATGAACAGTCTGAGAGCCGAG GACACGGCTGTGTATTACTGTGCAAGAGGGCAGCACCTGGTTCAG GACTATTGGGGCCAGGGAACCCTGGTCACCGTCTCTTCA
1073	ATX-P-3396	VH nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAACCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCTTCAC CGGCTACTATATGCACTGGGTGCGACAGGCCCCTGGACAAGGGC TTGAGTGGATGGGATGGATCAACCCTAACAGTGGTGGCACAAAC TATGCACAGAAGTTTCAGGGCAGGGTCACCATGACCAGGGACAC GTCCATCAGCACAGCCTACATGGAGCTGAGCAGGCTGAGATCTG ACGACACGGCCGTGTATTACTGTGCGAGAGAACGGGGCGACTAT GATGGCGATGCTTTTGATATCTGGGGACAAGGGACAATGGTCACC GTCTCTTCA
1074	ATX-P-3397	VH nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTCCAGCCTGG GGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTTAG TAACTATTACATGAACTGGGTCCGCCAGGCTCCAGGGAAGGGGC TGGAGTGGGTGGCCAACATAAAGCAAGATGGAAGTGAGAAATAC TATGTGGACTCTGTGAAGGGCCGCTTCACCATCTCCAGAGACAAC GCCAAGAACTCACTGTATCTCCAAATGAACAGCCTGAGAGCCGA GGACACGGCTGTGTATTACTGTGCGAGAGATGGGTACTACAACTT CGATGCTTTTGATATCTGGGGACAAGGGACAATGGTCACCGTCTC TTCA
1075	ATX-P-3405	VH nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCTGG GGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAG TAGCTATAGCATGAACTGGGTCCGCCAGGCTCCAGGGAAGGGGC TGGAGTGGGTCTCATCCATTAGTAGTAGTAGTAGTTACATATACT ACGCAGACTCAGTGAAGGGCCGATTCACCATCTCCAGAGACAAC GCCAAGAACTCACTGTATCTGCAAATGAACAGCCTGAGAGCCGA GGACACGGCCGTGTATTACTGTGCGAGAGAAGGGTATGATAACT GGAACTCTGCTTGTGATATCTGGGGACAAGGGACAATGGTCACC GTCTCTTCA
1076	ATX-P-3406	VH nt	CAGATCACCTTGAAGGAGTCTGGTCCTACGCTGGTGAAACCCACA CAGACCCTCACGCTGACCTGCACCTTCTCTGGGTTTTCACTCAGC ACTAGTGGAGTGGGTGTGGGCTGGATCCGTCAGCCCCCAGGAAA GGCCCTGGAGTGGCTTGCACTCATTTATTGGAATGGTGATGAGCG CTACAGCCCATCTCTGAAGAGCAGGCTCACCATCACCAAGGACA CCTCCAAAAACCAAGTGGTCCTTACAATGACCAACATGGACCCTG TGGACACAGCCACATATTACTGTGCACACAGTCCGAACTGGGGAT ATGAAGCTTTTGATATCTGGGGACAAGGGACAATGGTCACCGTCT CTTCA
1077	ATX-P-3407	VH nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCCTGGTCCCGCCTGG GGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAG TAGCTATTGCATGAACTGGGTCCGCCAGGCTCCAGGGAAGGGGC TGGAGTGGGTCTCATCCATTAATAGTGATAGTAGTTACATATACT ACGCGGACTCAGTGAAGGGCCGATTCACCATCTCCAGAGACAAC GCCAAGAACTCACTGTATCTGCAAATGAACAGCCTGAGAGCCGA GGACACGGCTGTGTATTACTGTGCGAGAGAGGGATACTACAACT GGAACGGAGGGAATGACTACTGGGGCCAGGGAACCCTGGTCACC GTCTCCTCA

1078	ATX-P-3408	VH nt	GAGGTGCAGCTGGTGGAGTCCGGGGGAGGCTTAGTTCAGCCTGG GGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAG TAGCTATTGGATGCACTGGGTCCGCCAAGCTCCAGGGAAGGGGC TGGTGTGGGTCTCACATATTAATAGTGATGGGAGTAGCACAAACT ACGCGGACTCCGTGAAGGGCCGATTCACCATCTCCAGAGACAAC GCCAAGAACACGCTGTATCTGCAGATGAACAGTCTGAGATCCGA GGACACGGCTGTATATTACTGTGCAAGAGAGGGTTACTGGAACG GTGATACTTTTGATATCTGGGGACAAGGGACAATGGTCACCGTCT CTTCA
1079	ATX-P-3410	VH nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCTGG GGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAG TGCCTACGACATGCACTGGGTCCGCCAAACTCCAGGAAAAGGTCT GGAGTGGGTCTCAACTATTGGTACTGCTGGTGACACATACTATCC AGACTCCGTGAAGGGCCGATTCACCATCTCCAGAGATTTTGCCAG GAGGTCCTTGTATCTTCACATGAACAATCTGAGAGCCGGGGACAC GGCTGTATATTACTGTGCAAGAGGGGGCAGCAGCAGCTGGTACG ACTGGTACTTCGATCTCTGGGGCCGTGGCACCCTGGTCACTGTCT CCTCA
1080	ATX-P-3412	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG CAGTAGTACCTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGATTGGGGAAATCTATCATAGTGGGAGCACCAAC TATAACCCGTCCCTCAAGAGTCGAGTCACCATATCACTAGACAAG TCCAAGAACCAGTTTTCCCTGAAGCTGAGCTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGATTAGTTTATACAACTGGAAC GATGCTGCTTTTGATATCTGGGGACAAGGGACAATGGTCACCGTC TCTTCA
1081	ATX-P-3413	VH nt	CAGGTGCAGCTGGTGCAGTCTGGGTCTGAGGTGAAGAAGCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGACTTCTGGATACACGTTCAC CGGCTACTATATGCACTGGGTGCGACAGGCCCCTGGACAAGGGC TTGAGTGGATGGGATGGATCAACCCTAACAGTGGTGGCACAACC TATGCACAGAAGTTTCAGGGCAGGGTCACCATGACCAGGGACAC GTCCATCAGCACAGCCTACATGGAGCTGAACAGGCTGAGATCTG ACGACACGGCCGTGTATTACTGTGCGAGAGAGGCAGGTGGTTCA GGTGAATACTTCCAGCACTGGGGCCAGGGCACCCCGGTCACCGTC TCTTCA
1082	ATX-P-3414	VH nt	CAGATCACCTTGAAGGAGTCTGGTCCTACGCTGGTGAAACCCACA CAGACCCTCACGCTGACCTGCACCTTCTCTGGGTTCTCACTCAGC ACTAGTGGAGTGGGTGTGGGCTGGATCCGTCAGCCCCCAGGAAA GGCCCTGGAGTGGCTTGCACTCATTTATTGGAATGATGTTAAGTT CTACAGTCCATCTCTGCAGAGCAGGCTCACCATCACCAAGGACAC CTCCAAAAACCAGGTGGTCCTTACACTGACCAACATGGACCCTGT GGACACAGCCACATATTACTGTGCACACGGGGATAACTGGAACT ACCGTGCTTTTGATATCTGGGGACAAGGGACAATGGTCACCGTCT CTTCA
1083	ATX-P-3419	VH nt	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCTTTAC CAGCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACAAGGGC TTGAGTGGATGGGATGGATCAGCGCTTATAATGGTAACACACACT ATGCACAGAACCTCCAGGGCAGAGTCACCATGACCACAGACACA TCCACGAGCACAGCCTACATGGAGCTGAGGAGCCTGAGATCTGA CGACACGGCCGTGTATTACTGTGCGAGGAGTATAGCAGCCCTTGA CTTCTGGGGCCAGGGAACCCCGGTCACCGTCTCCTCA
1084	ATX-P-3421	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG CAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG

			GACTGGAGTGGATTGGACAAATCTATCATAGTGAAAACACCAAC TACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAG TCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCCGCG GACACGGCCATCTATTACTGTGCGAGAGTGGATGACTGGAACTAC GGGGGTCACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTC TCCTCA
1085	ATX-P-3428	VH nt	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCTGG GGCCTCAGTTAAGGTCTCCTGCAAGGCTTCTGGTTACACCTTTAC CGGCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACAAGGGC TTGAGTGGATGGGATGGATCAGCGCTTACAATGGTAACACACACT ATGCACAGAACCTCCAGGGCAGAGTCACCATGACCACCGACACA TCCACGAACACAGCCTACATGGAGCTGAGGAGCCTTATATCTGAC GACACGGCCTTTTATTATTGTGCGAGAGCGGGACTGGGGATCGAC TACTGGGGCCAGGGAACCCTGGTCACTGTCTCCTCA
1086	ATX-P-3430	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG CAGTAGTGACTGGTGGAGTTGGGTCCGCCAGTCCCCAGGGAAGG GGCTGGAGTGGATTGGGGAAATCTATCATAGTGGGAGCACCAAC TACAACCCGTCCCTCAAGAGTCGAGTCTCCATATCAGTAGACAAG TCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGAGAGGGGGGCACATAGGCTA CTACTACATGGACGTCTGGGGCAAAGGGACCACGGTCACCGTCTC CTCA
1087	ATX-P-3431	VH nt	GAGGTGCAGCTGGTGCAGTCTGGAGCAGAGGTGAAAAAGCCCGG GGAGTCTCTGAAGATCTCCTGTAAGGGTTCTGGATACAGCTTTAC CAACTACTGGATCGGCTGGGTGCGCCAGATGCCCGGGAAAGGCC TGGAGTGGATGGGGATCATCTATCCTGGTGACTCTGATACCATAT ACAGCCCGTCCTTCCAAGGCCAGGTCACCTTCTCAGCCGACAAGT CCATCAACACCGCCTACCTGCAGTGGAGCAGCCTGAAGGCCTCG GACACCGCCATGTATTACTGTGCGAGAGGACGTGGATATAGTGG CTACGAAGGTGCTTTTGATATCTGGGGACAAGGGACAATGGTCAC CGTCTCTTCA
1088	ATX-P-3435	VH nt	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCTTTAC CAACTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACAAGGGC TTGAGTGGATGGGATGGATCAGCGCTTACAATGGTAACACACACT ATGCACAGAAACTCCAGGGCAGAGTCACCATGACCACAGACACA TCCACGAGCACAGCCTACATGGAGCTGAGGAGCCTGAGATCAGA CGACACGGCCGTGTATTACTGTGCGAGAGCGGCAGCAGCCGTTG ACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCTTCA
1089	ATX-P-3436	VH nt	CAGGTGCAGCTGCAGGAGTCGGGTCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCAGTTGCACTGTCTCTGGTGGCTCCGTCAG CAGTGGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCAGGGA AGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACC AAGTACAACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTAGAC ACGTCCAAGAACCAGGTCTCCCTGAAGCTGAGTTCTGTGACCGCT GCGGACACGGCCGTGTATTACTGTGCGAGAGATAAGGGGCACTG GAACTACGGTGCTTTTGATATCTGGGGACAAGGGACAATGGTCAC CGTCTCTTCA
1090	ATX-P-3437	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG CAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGATTGGGGAAATCTATCATAGTGGAAATATTAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTGGACAAGT CCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCCGCGG ACACGGCCGTGTATTACTGTGCGAGAGGGGGGGAATACGGTGAC

			CCCGTGGGGTACTTCGATCTCTGGGGCCGTGGCACCCTGGTCACT GTCTCCTCA
1091	ATX-P-3440	VH nt	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCTTTAC CACCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACAAGGGC TTGAGTGGATGGGATGGATCAGCGCTTACAGTGGTAACACAAAC TATGCACAGAAGCTCCAGGGCAGAGTCACCATGACCACAGACAC ATCCACGAGCACAGCCTACATGGAGCTGAGGAGCCTGAGATCTG ACGACACGGCCGTGTATTACTGTGCGAGAGAGAGAGTCTCCAAC TGGGTCTTTGACTTCTGGGGCCAGGGAACCCTGGTCACTGTCTCC TCA
1092	ATX-P-3442	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGTTCCATCAG CAGTAGTGACTGGTGGAGCTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGATTGGGGAAATCTATCATAGTAGGAACACCAAC TACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAG TCCAAGAACCAGTTCTCCCTGAAGCTGAGTTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGAGTGGAGGTGTGGTGGCCGA CTACTACATGGACGTCTGGGGCAAAGGGACCACGGTCACCGTCTC CTCA
1093	ATX-P-3444	VH nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCCTGGTCAAGCCTGG GGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAG TAGCTATGGCATGAACTGGGTCCGCCAGGCTCCAGGGAAGGGGC TGGAGTGGGTCTCATCCATTAGTGGTTATGGTAGTTACATATACT ACGCAGCCTCAGTGAAGGGCCGATTCACCATCTCCAGAGACAGC GCCAAGAACTCACTGTATCTGCAAATGAACAGCCTGAGCGCCGA GGACACAGCTGTGTATTACTGTGCGAGAGAATTAGGTGGGATCTA CTACGGGGTAGGGTACTTCGATCTCTGGGGCCGTGGCACCCTGGT CACTGTCTCCTCA
1094	ATX-P-3447	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCGTCAG CAGTGGTAATTACTATTGGAGCTGGATCCGGCAGCCCCCAGGGA AGGGACTGGAGTGGATTGGGTATATCTATTCCAGTGGGAGCACC AACTACAACCCCTCCCTCAAGAGTCGAGTCACCATATCAATAGAC ACGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCT GCGGACACGGCCGTGTATTACTGTGCGAGAAGTCCTCGTGGATAC AGCTATGGTCCCTTTGCCTACTGGGGCCAGGGGACCCTGGTCACC GTCTCTTCA
1095	ATX-P-3448	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC ACAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCATCAG CAGTGGTGGTTACAACTGGAACTGGATCCGCCAGCACCCAGGGA AGGGCCTGGAATGGATTGGGTACATCAATTACAGTGGGAATACC TATTACAACCCGTCCCTCAAGAGTCGAGTTACCATATCAGTAGAC ACGTCTAAGAACCAGTTCTCCCTGAAGCTGAGTTCTGTGACTGCC GCGGACACGGCCGTTTATTACTGTGCGAGAGGGCCCCTGGATACA GCTATGGCCCCCTTTGACTACTGGGGCCAGGGAACCCTGGTCACC GTCTCCTCA
1096	ATX-P-3449	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGTACTGTCTCTGGTGACTCCATCAG TAGTTACTACTGGAGTTGGATCCGGCAGCCCCCAGGGAAGGGAC TGGAGTGGATTGGATATATCTATTATAGTGGGTTCACCAAGTACA ACCCCTCCCTCAAGAGTCGAGTCACCATTTCAGTAGACACGTCCA AGAACCAGTTCTCCCTGAGGCTGAGCTCTGTGACCGCTGCGGACA CGGCCGTGTATTACTGTGCGAGCGTCGATTCAAAGTGGAACTACG GGTCTTTTCATATCTGGGGACAAGGGACAATGGTCACCGTCTCTT CA

1097	ATX-P-3450	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGGCTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCTCTGTCTCTGGTGACTCCGTCAG CAATAATCGTTATTATTGGAGCTGGATTCGGCAGCCCCCAGGGAA GGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGAGCACCA ACTACAACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTAGACA CGTCCAAGAACCAGTTGTCCCTGAACCTGAGTTCTGTGACCGCTG CGGACACGGCCGTGTATTACTGTGCGAGAGATCGCCCATCCCGGT ATAAGTGGAATTACGATGCTTTTGCTATCTGGGGACAAGGGACAA TGGTCACCGTCTCTTCA
1098	ATX-P-3451	VH nt	CAGGTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCGCTGTCTATGGTGGGTCCTTCAG TGATTACTACTGGACCTGGATCCGCCAGCCCCCAGGGAAGGGGCT GGAGTGGATTGGTGAAGTCAATCATATTGGAAGCACCAACTACA ACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCA AGAACCAGTTCTCCCTGAACCTGAGCTCTGTGACCGCCGCGGACA CGGCTGTGTATTACTGTGCGAAGTATAGCACTTCCTGGTACGGCT GGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACTGTCTCCTCA
1099	ATX-P-3453	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGGCTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCATCAG CAGTAATAACTGGTGGAGTTGGTTCCGCCAGCCCCCAGGGAAGG GACTGGAGTGGATTGGGAGAATCTATCATAGTGGGACCACCAAC TACAACCCGTCCCTCGAGAGTCGAGTCACCATATCAGTAGACAAC TCCAGGAACCAGTTCTCCCTGAAACTGAGCTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGAGAGGCGAGGAGTGGGAGCT GCGGGGAGGTGTTTTTGATATCTGGGGACAAGGGACAATGGTCA CCGTCTCTTCA
1100	ATX-P-3454	VH nt	CAGGTGCAGCTGGTGCAATCTGGGCCTGAGTTGAAGAAGCCTGG GGCCTCAGTAAAGGTTTCCTGCAAGGCTTCTGGATACACCTTCAC TAACTATGCTGTGAATTGGGTGCGACAGGCCCCTGGACAAGGGCT TGAGTGGATGGGATGGATCAACACCAACACTGGGCACCCAACGT ATGCCCAGGGCTTCACAGGACGGTTTGTCTTCTCCTTGGACACCT CTGTCAGTACGGCATATCTGCAGATCAGCAGCCTAAAGGCTGAG GACACTGCCGTTTATTACTGTGCGAGAGACAGCAGCAGCTGGGG CTACTGGGGCCAGGGAACCCTGGTCACTGTCTCCTCA
1101	ATX-P-3455	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGACGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCATCAG TAGTGATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG GACTGGAGTGGATTGGGGAAATCTATCACAGTGAAAACACCAAC TACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAG TCCAAGAACCAGTTCTCCCTGAGGCTGAACTCTGTGACCGCCGCG GACACGGCCATGTATTACTGTGCGAGAGGGAGGGAGCTAACTGG CCTCTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTC A
1102	ATX-P-3456	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG CAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGAAAGG GACTGGAATGGATTGGGGACATCTATCATAGTGGAAACACCAAC TACAACCCGTCCCTCAAGAGTCGAGTCACCCTATCAGTAGACATG TCCAAGAACCAGTTCTCCCTGAAACTGAACTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGAGAGGAGGTATAGCAGTGAC TGCCTACTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTC CTCA
1103	ATX-P-3458	VH nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCTTCAC CGGCTACTATTTGCACTGGGTGCGACAGGCCCCTGGACAAGGGCT TGAGTGGATGGGATGGATCAACCCTCACAGTGGTGGCACAATCT

			ATGCACAGAAGTTTCAGGACAGGGTCACCATGACCAGGGACACG TCCATCAGCACAGCCTACATGGAGCTGAGCAGGCTGAGATCTGA CGACACGGCCGTGTATTACTGTGCGAACTGGAACTCCGGGGACTC CTACTACTACTACATGGACGTCTGGGGCAAAGGGACCACGGTCA CCGTCTCCTCA
1104	ATX-P-3459	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGTTCCATCAG CAGTGATAACTGGTGGAATTGGGTCCGCCAGCCCCCAGGGAAGG GGCTGGAGTGGATTGGAAAAATCTATCATAGTGGGAACACCAAC TACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACGAG TCCAAGAACCAGTTCTCCCTGAGGCTGTACTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGAGAGGGGTCGATTTTTGGAGT GGTTCCCACATGGACGTCTGGGGCAAAGGGACCACGGTCACCGT CTCCTCA
1105	ATX-P-3462	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATTAG CAGTAATAATTGGTGGAGTTGGGTCCGCCAGGCCCCAGGGAAGG GGCTGGAGTGGATTGGGAAGATCTATCAAAGTGGGAGCACCATG TACAACCCGTCCCTCAAGAGTCGAGTCACCATGTCGGTAGACAAG TCCAAGAACCAGTTCTCCCTGATTCTGAGTTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGAGAGATAAACCCCCTTTACTG GGAGCCTTTGACTACTGGGGCCAGGGAACCCTGGTCACTGTCTCC TCA
1106	ATX-P-3463	VH nt	CAGGTGCAGCTGGTGGAGTCTGGGGGAGGCGTGGTCCAGCCTGG GAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAG TAGCTATGCCATGCACTGGGTCCGCCAGGCTCCAGGCAAGGGGCT GGAGTGGGTGGCAGTTATATCATATGATGGAAGTAATAAATACT ATGCGGACTCCGTGAAGGGCCGATTCACCATCTCCAGAGACAATT CCAAGAACACGCTGTCTCTGCAAATGAACAGCCTGAGAGCTGAG GACACGGCTGTGTATTACTGTGCGAAAAGGGGGGGATACAGCTA TGGTCCTTTTGAACACTGGGGCCAGGGAACCCTGGTCACCGTCTC CTCA
1107	ATX-P-3466	VH nt	CAGGTGCAGCTGGTGCAATCTGGGTCTGAATTGAAGAAGCCTGG GGCCTCAGTGAAGGTTTCCTGCAAGGCTTCTGGATACACCTTCAC TAGCTATACTATGAATTGGGTGCGACAGGCCCCTGGACAAGGGCT TGAGTGGGTGGGATGGATCAACACCGCCACTGGGACCCCAACGT ATGCCCAGGGCTTCACAGGACGGTATGTCTTCTCCTTGGACACCT CTGTCAGCACGGCTTATCTGCAGATCAGCGGCCTAAAGGCTGAGG ACACTGCCGTGTATTTCTGTGCGAGGTATAGTGGGAGCCACTCCT TTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCTTCA
1108	ATX-P-3467	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG TAGTGATTACTGGTGGAGTTGGGTCCGCCAGTCCCCAGGGAAGG GGCTGGAGTGGATTGGGAAAATCTATCATAGTGGGAACACCAAC CACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAATAGACAA GTCCAGGAACCAGTTCTCCCTGAATCTGAACTCTGTGACCGCCGC GGACACGGCCGTGTATTACTGTGCGAGAGAAGGACTGGAACTTC CCCACATGGACGTCTGGGGCAAAGGGACCACGGTCACCGTCTCCT CA
1109	ATX-P-3468	VH nt	CAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTCCAGCCTGG GAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAG TAGTTATGCTATGCACTGGGTCCGCCAGGCTCCAGGCAAGGGGCT GGAGTGGGTGACAGTTATATCATATGATGGAAGTAATAAATACT ATGCAGACTCCGTGAAGGGCCGATTCACCATCTCCAGAGACAATT CCAAGAACACGCTGTATCTGCAAATGAACAGCCTGAGAGCTGAG GACACGGCTGTGTATTACTGTGCGAAAAGGGGTAACTGGAACTA

			CGGACCTTTTCACTACTGGGGCCAGGGAACCCTGGTCACTGTCTC CTCA
1110	ATX-P-3469	VH nt	CAGGTGCAGCTGGTGGAGTCTGGGGGAGGCGTGGTCCAGCCTGG GAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTCAG TGCCTATGCCATCCACTGGGTCCGCCAGGCTCCAGGCAAGGGGCT GGAGTGGGTGGCAGTTATATCATATGATGGAAGTAATAAAAAGT ATGCAGACTCCGTGAAGGGCCGATTCACCATCTCCAGAGACAATT CCAAGAACACGCTGGATCTGGAAATGAACAGCCTGAGAGCTGAG GACACGGCTGTGTACTACTGTGCGAAAGGGCTACCTTTTGACTAC TGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA
1111	ATX-P-3470	VH nt	CAGGTGCAGCTGGTGCAATCTGGGTCTGACTTGAAGAAGCCTGG GGCCTCAGTGAAGGTTTCCTGCAAGGCTTCTGGATACACCTTCAC TAGTTATACTATGAATTGGGTGCGACAGGCCCCTGGACAAGGGCT TGAGTGGATGGGATGGATCAACACCAACACTGGGACCCCAACGT ATGCCCAGGGCTTCACAGGACGGTTTGTCTTCTCCTTGGACACCT CTGTCAGCACGGCATATCTGCAGATCAGCAGCCTAAAGGCTGAG GACACTGCCGTGTATTACTGTACGAGGTATACTGGGAACTACTCC TTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCA
1112	ATX-P-3471	VH nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGTCTTGGTACAGCCTGG GGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCTTTAG GAGCTATGCCATGAGCTGGGTCCGCCAGGCTCCAGGGAAGGGGC TGGAGTGGGTCTCAGCTATTAGTGGTAGTGGTGATAGCACATACT TCGCAGACTCCGTGAAGGGCCGGTTCACCATCTCCAGAGACAATT CCAAGAACACGCTGTCTCTGCAAATGAACAGCCTGAGAGCCGAG GACACGGCCGTATATTACTGTGCGAGCATCCTAGGATATTGTAGT GGTACCAGCTGCTATGGCCTCTTTGACAACTGGGGCCAGGGAACC CTGGTCACCGTCTCCTCA
1113	ATX-P-3472	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCATCAG TAATGATAACTGGTGGAGTTGGGTCCGCCAGTCCCCCGGGAAGG GGCTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTCACCAACT ACAACCCGTCCCTCAGGAGTCGAGTCACCATATCAGTAGACAAGT CCAAGAACCAGTTCTCCCTGGAGCTGACCTCTGTGACCGCCGCGG ACACGGCCGTGTATTACTGTGCGAGAGAGTATCAGAACTACATG GACGTCTGGGGCAAAGGGACCACGGTCACCGTCTCCTCA
1114	ATX-P-3361	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGTTGTCTCTGGTGACTCCATCAG CAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG GTCTGGAGTGGATTGGACAAATCTATCATAGTGGAATCACCAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGT CCAAGAACCAGTTCTCCCTGGAGCTGACCTCTGTGACCGCCGCGG ACGCGGCCGTGTATTACTGTGCGAGGGCCCAGTGGGAACTACGA GCGGGCTGGTTCGACCCCTGGGGCCAGGGAACCCTGGTCACCGTC TCCTCA
1115	ATX-P-3366	VH nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTAAAGCCTGG GGGGACCCTTACACTCTCCTGTGCAGCCTCTGGATTCACTTTCAGT AACGCCTGGATGAGCTGGGTCCGCCAGGCTCCAGGGAAGGGGCT GGAGTGGGTTGGCCGTATTAAAAGCAAAACTGATGGCGGGACAA CAGACTACGCTGCACCCGTGAAAGGCAGATTCACCATCTCAAGA GATGATTCAAAAAACACGCTGTATCTGCAAATGAACAGCCTGAA AACCGAGGACACAGCCGTGTATTACTGTACCCCCCGGTACAACTC GGACTTTGACTACTGGGGCCAAGGAACCCTGGTCACCGTCTCTTC A
1116	ATX-P-3376	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCATCAG

			TAGTTACTACTGGAGCTGGATCCGGCAGCCCCCAGGGAAGGGAC TGGAGTGGATTGGGTATATCTATTACAGTGGGTTCACCAAGTACA ACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTAGACACGTCCA AGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCTGCGGACA CGGCCGTGTATTACTGTGCGACCCACCCTCGTGGATACAACTATG GTCCCTTTGACTACTGGGGCCAGGGAACCCTGGTCACTGTCTCCT CA
1117	ATX-P-3377	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCGTCAA CAGTGGTCGTTACTACTGGAGCTGGATCCGGCAGCCCCCAGGGA AGGGACTGGAGTGGATTGGGTATATCTATTCCAGTGGGTACACCA ACTACAACCCCTCCCTCAAGAGTCGAGTCACCATGTTACTAGACA CGTCCAAGAACCAGTTCTCCCTGAAGCTGAACTCCGTGACCGCTG CGGACACGGCCGTGTATTACTGTGCGAGGTCACGTGGATACCGCT ATGGTCCCTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCT CCTCA
1118	ATX-P-3418	VH nt	CAGGTGCAGCTGGTGCAATCTGGGTCTGAGTTGAAGAAGCCTGG GGCCTCAGTGAAGGTTTCCTGCGAGGCTTCTGGATACACCTTCAC TAGCTATGCTATGAATTGGGTGCGACAGGCCCCTGGACAAGGGCT TGAGTGGATGGGATGGATCAACACCAACACTGGGACCCCAACTT ATGCCCAGGGCTTCACAGGACGGTTTGTCTTCTCCTTGGACACCT CTGTCAGCACGGCATATCTGCAGATCAGCAGCCTAAAGGCTGAG GACACTGCCGTGTATTACTGTGCGAGTCATAGCACCTCGTTTGAC TACTGGGGCCAGGGGACCCTGGTCACCGTCTCCTCA
1119	ATX-P-3420	VH nt	CAGGTGCAGCTACAGCAGTGGGGCGCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCGCTGTCCATGGTGGGTCCTTCAG TGATTACTACTTGACCTGGATTCGCCAGCCCCCAGGGAAGGGGCT GGAGTGGATTGGGGAAATCAATCATAGTGGAAGCACCAACTACA ACCCCTCCCTCAAGAGTCGAGTCACCTTATCAATAGACACGTCCA AGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCCGCGGACA CGGCTGTGTATTACTGTGCGAGAGGTAGTGAAGACTACTACTATT ACATGGACGTCTGGGGCAAAGGGACCACGGTCACCGTCTCCTCA
1120	ATX-P-3426	VH nt	GAGGTGCAGCTGGTGCAGTCTGGAGCAGAGGTGAAAAAGCCCGG GGAGTCTCTGAAGATCTCCTGTAAGGGTTCTGGATACATCTTTAC CAGCTACTGGATCGGCTGGGTGCGCCAGATGCCCGGGAAAGGCC TGGAGTGGATGGGGATCATCTATCCTGGTGACTCTGATACCAGAT ACAGCCCGTCTTTCCAAGGCCAGGTCACCATCTCAGCCGACAAGT CCATCATCACCGCCTACCTGCAGTGGAGCAGCCTGAAGGCCTCGG ACACCGCCATGTATTACTGTGCGAGACACGACTACTTTGATATTG GAGGTTATTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCT CCTCA
1121	ATX-P-3432	VH nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGGCTGATGGATACACCTTCAC CGACTACTATATGCACTGGGTGCGACAGGCCCCTGGACAAGGGC ATGAGTGGATGGGATGGATCAACCCTAACAGTGGTGTCACATACT ATGCACAGAAGTTTCAGGGCAGGGTCACCATGACCAGGGACACG TCCATCAGCACAGCCTACATGGAGCTGAACAGACTTAGATCTGAC GACACGGCCGTGTATTACTGTGCGAGAGATCGGACCTTCTACTTT GACTACTGGGGCCAGGGAACCCTGGTCACTGTCTCCTCA
1122	ATX-P-3433	VH nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCTTCAC CGACTACTATATGCACTGGGTGCGACAGGCCCCTGGACAAGGGC TTGAGTGGATGGGATGGATCAACCCTAACAATGGTGGCACAGAC TATGCACAGAAGTTTCAGGGCAGGGTCACCATGACCAGGGACAC GTCCATCAGCACAGCCTACATGGAGTTACACAGGCTAAGATCTGA CGACACGGCCGTGTATTTCTGTGCGAGAGGGGTCTATGATGTAGT

			AGTTCCAACTGCTATCGTCAACTGGTTCGACCCCTGGGGCCAGGG AACCCTGGTCACCGTCTCCTCA
1123	ATX-P-3438	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCATCAG CAATGATTACTGGTGGAATTGGGTCCGCCAGCCCCCAGGGAAGG GTCTGGAGTGGATTGGAGAAATCTATCATAGTGGGCACACCAACT ACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAGACAAGT CCAAGAACCAGTTGTCCCTGAAGCTGACCTCTGTGAACGCCGCGG ACACGGCCGTGTATTACTGTGCGAGAGGTGGAACTGAAATTACG GGGTACATGGACGTCTGGGGCAAAGGGACCACGGTCACCGTCTC CTCA
1124	ATX-P-3441	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGCCTCCATCAG AAGTGGTCACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGGAAGG GACTGGAGTGGATTGGGGAAATCTATCATAGTGGGAACACCAAC TACAACCCGTCCCTCAAGAGTCGAGTCACCCTATCAGTAGACAAG TCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGACCGCCGCG GACACGGCCGTGTATTACTGTGCGAGAGGTCACTACGGTGACTAC GTCGTCTACTTTGACTACTGGGGCCAGGGAACCCTGGTCACTGTC TCCTCA
1125	ATX-P-3446	VH nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCTTC GGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCATCAG TAGTTACTATTGGAGCTGGATCCGGCAGCCCCCAGGGAAGGGAC TGGAATGGATTGGTTATGTCTATTACAGTGGGTACACCAAGTACA ATCCCTCCCTCAAGAGTCGAGTCACCATATCAATAGACGCGTCCA AGAACCAGTTCTCCCTGAAGCTGACCTCTGTGACCGCTGCGGACA CGGCCGTGTATTACTGTGCGACCGTCGAATCAAAGTGGAACTACG GGCCTTTTGCTATCTGGGGACAAGGGACAATGGTCACCGTCTCTT CA
1126	ATX-P-3452	VH nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCTGG GGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCTTCAC CGGCTACTATATGAACTGGGTGCGACAGGCCCCTGGACAAGGGC TTGAGTGGATGGGATGGATCAACCCTAACAGTGGTGCCACAAAC TATGCACAGAAGTTTCAGGGCAGGGTCACCATGACCAGGGACAC GTCCATCAGCACAGACTACATGGAACTGAGCAGGCTGAGATCTG ACGACACGGCCGTTTATTACTGTGCGAGAGATGGGGCTAAGTGG AATCACGAGGGTTACTACTTTGACTACTGGGGCCAGGGAACCCTG GTCACCGTCTCCTCA
1127	ATX-P-3360	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISINNWWSWVRQPPGKGL EWLGKIYHSGNTDYNPSLKSRVTISVDKSKNQFSLRLSSVTAADTAV YYCASGSDYDFWSGYLDYWGQGTLVTVSS
1128	ATX-P-3362	VH aa	EVQLVESGGGLVQPGRSLRLSCAASGFTFDDYAMHWVRQAPGKGL EWVSGISWNSGSIAYADSVKGRFTISRDNAKNSLYLQMNSLRVEDT AFFYCARVAAAAGIPFFDYWGQGTLVTVSS
1129	ATX-P-3363	VH aa	QVQLQESGPGLVKPSGTLTLTCAVSGGSINRDNWWSWVRQPPGKGL EWIGQIYQSGSTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAADTAV YYCARVYDWNYGGHFDYWGQGTLVTVSS
1130	ATX-P-3365	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGDSISSNNWWSWVRQPPGKGL EWIGQIYHSGHTNYNPSLKSRVTISVDMSKNQFSLKLTSVTAADTAV YYCARGATEILGYFDLWGRGTLVTVSS
1131	ATX-P-3367	VH aa	QVQLQESGPGLVKPSETLSLTCTVSGGSVSSGSYYWSWIRQPPGKGL EWIGYIYKSGFTNYNPSLKSRVTISVDTSKNQFSLKLSSVTAADTAVY YCAIGGRGYSYGPFDYWGQGTLVTVSS

1132	ATX-P-3369	VH aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYLHWVRQAPGQGL EWMGWINPNSGDTNYVQNFQGRVTMTRDTSISTAYMELSRLRSDD TAVYYCARSYVDTSSSAFDIWGQGTMVTVSS
1133	ATX-P-3370	VH aa	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPPGKGLEWI GYVYYSGYTKYNPSLKSRVTISVDTPKTQFSLKMSSVTAADTAVYY CASVESKWNYGPFDIWGQGTMVTVSS
1134	ATX-P-3371	VH aa	QVQLQESGPGLVKPSETLSLTCTVSGDSISSYYWSWIRQPPGKGLEWI GYIYYSGFTKYNPSLNSRVTISVDTSKSQFSLKLTSVTAADTAVYYC AMREPRGRYNWNYGPFDIWGQGTMVTVSS
1135	ATX-P-3373	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQPPGKGL EWIGKIYHSEFTNYNPSLKSRVTISVDKSKNQFSLELNSVTAADTAV YYCAREYHNFMDVWCKGTTVTVSS
1136	ATX-P-3375	VH aa	QVQLQESGPGLVKPSETLSLTCTVSGDSVSSGKYFWSWIRQSPGKGL EWIGYIYYSGSTNYNPSLKNRVTISVDTSKKELSLKLSSVTAADTAV YYCARGGHNWNYAAFDIWGQGTMVTVSS
1137	ATX-P-3378	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQSPGKGL EWIGKIYHSEFTNYNPSLKSRVTISVDKSKNQFSLELSSVAAADTAVY YCAREYENFMDVWGKGTTVTVSS
1138	ATX-P-3382	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGDSISSNSWWNWVRQPPGKGL EWIGQIFHSGHTNYNPSLKSRVTMSIDKSKNQFSLKLTSVTAADTAL YYCARGGEYENSANWFDPWGQGTLVTVSS
1139	ATX-P-3383	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGVSINKDNWWTWVRQPPGKG LEWIGKIYHSGSTNYNPSLKSRVTISVDNSKNQFSLKLNSVTAADTA VYYCTRGGDIAMEGDWFAPWGQGTLVTVSS
1140	ATX-P-3384	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSDNWWNWVRQPPGKGL EWLGKIYHSGNTDYNPSLKSRVTISVDKSKNQFSLRLSSVTAADTAV YYCARGGTETTGYMDVWGKGTTVTVSS
1141	ATX-P-3386	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQPPGKGL EWIGKIYHSGFTNYNPSLKSRVTISVDKSKNQFSLKLNSVTAADTAV YYCARGGDNFMEGEGLGTWGPGTLVTVSS
1142	ATX-P-3387	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWNWVRQSPGKGL EWIGKIYHSGFTDYNPSLKSRVTISVDKSKNQFSLKLSSVTAADTAV YYCARGNHNYLWIGYLGTWGPGTLVTVSS
1143	ATX-P-3389	VH aa	QVQLQESGPGLVKPSGTLSLICAVSGGSISSSNWWSWVRQPPGKGLE WIGRIYHSGHTNYNPSLKSRVTISVDKSKNQFSLKLTSVTAADTAVY YCARGRDLTGYFDYWGQGTLVTVSS
1144	ATX-P-3391	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQSPGKGL EWIGKIYHSEFTNYNPSLKSRVTISVDKSKNQFSLELSSVTAADTAVY YCARGVDFWSGSHMDVWGKGTTVTVSS
1145	ATX-P-3392	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQSPGKGL EWIGKIYHSEFTNYNPSLKSRVTISVDKSKNQFSLELSSVTAADTAVY FCAREGLELPHMDVWGKGTTVTVSS
1146	ATX-P-3395	VH aa	EVQLVESGGGVVKPGGSLRLSCAASGFTFSSYWMHWVRQAPGKGL VWVSRINSDGSSTSYADSVQGRFTISRDIAKNTLYLQMNSLRAEDTA VYYCARGQHLVQDYWGQGTLVTVSS
1147	ATX-P-3396	VH aa	QVQLVQSGAEVKNPGASVKVSCKASGYTFTGYYMHWVRQAPGQG LEWMGWINPNSGGTNYAQKFQGRVTMTRDTSISTAYMELSRLRSD DTAVYYCARERGDYDGDAFDIWGQGTMVTVSS
1148	ATX-P-3397	VH aa	EVQLVESGGGLVQPGGSLRLSCAASGFTFSNYYMNWVRQAPGKGL EWVANIKQDGSEKYYVDSVKGRFTISRDNAKNSLYLQMNSLRAEDT AVYYCARDGYYNFDAFDIWGQGTMVTVSS
1149	ATX-P-3405	VH aa	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYSMNWVRQAPGKGLE WVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAV YYCAREGYDNWNSACDIWGQGTMVTVSS

1150	ATX-P-3406	VH aa	QITLKESGPTLVKPTQTLTLTCTFSGFSLSTSGVGVGWIRQPPGKALE WLALIYWNGDERYSPSLKSRLTITKDTSKNQVVLTMTNMDPVDTAT YYCAHSPNWGYEAFDIWGQGTMVTVSS
1151	ATX-P-3407	VH aa	EVQLVESGGGLVPPGGSLRLSCAASGFTFSSYCMNWVRQAPGKGLE WVSSINSDSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAEDTAV YYCAREGYYNWNGGNDYWGQGTLVTVSS
1152	ATX-P-3408	VH aa	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYWMHWVRQAPGKGL VWVSHINSDGSSTNYADSVKGRFTISRDNAKNTLYLQMNSLRSEDT AVYYCAREGYWNGDTFDIWGQGTMVTVSS
1153	ATX-P-3410	VH aa	EVQLVESGGGLVQPGGSLRLSCAASGFTFSAYDMHWVRQTPGKGLE WVSTIGTAGDTYYPDSVKGRFTISRDFARRSLYLHMNNLRAGDTAV YYCARGGSSSWYDWYFDLWGRGTLVTVSS
1154	ATX-P-3412	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSTWWSWVRQPPGKGLE WIGEIYHSGSTNYNPSLKSRVTISLDKSKNQFSLKLSSVTAADTAVYY CAISLYNWNDAAFDIWGQGTMVTVSS
1155	ATX-P-3413	VH aa	QVQLVQSGSEVKKPGASVKVSCKTSGYTFTGYYMHWVRQAPGQGL EWMGWINPNSGGTTYAQKFQGRVTMTRDTSISTAYMELNRLRSDD TAVYYCAREAGGSGEYFQHWGQGTPVTVSS
1156	ATX-P-3414	VH aa	QITLKESGPTLVKPTQTLTLTCTFSGFSLSTSGVGVGWIRQPPGKALE WLALIYWNDVKFYSPSLQSRLTITKDTSKNQVVLTLTNMDPVDTAT YYCAHGDNWNYRAFDIWGQGTMVTVSS
1157	ATX-P-3419	VH aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQGLE WMGWISAYNGNTHYAQNLQGRVTMTTDTSTSTAYMELRSLRSDDT AVYYCARSIAALDFWGQGTPVTVSS
1158	ATX-P-3421	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSNNWWSWVRQPPGKGL EWIGQIYHSENTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAADTAIY YCARVDDWNYGGHFDYWGQGTLVTVSS
1159	ATX-P-3428	VH aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYGISWVRQAPGQGL EWMGWISAYNGNTHYAQNLQGRVTMTTDTSTNTAYMELRSLISDD TAFYYCARAGLGIDYWGQGTLVTVSS
1160	ATX-P-3430	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSDWWSWVRQSPGKGL EWIGEIYHSGSTNYNPSLKSRVSISVDKSKNQFSLKLSSVTAADTAVY YCARGGHIGYYYMDVWGKGTTVTVSS
1161	ATX-P-3431	VH aa	EVQLVQSGAEVKKPGESLKISCKGSGYSFTNYWIGWVRQMPGKGLE WMGIIYPGDSDTIYSPSFQGQVTFSADKSINTAYLQWSSLKASDTAM YYCARGRGYSGYEGAFDIWGQGTMVTVSS
1162	ATX-P-3435	VH aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTNYGISWVRQAPGQGL EWMGWISAYNGNTHYAQKLQGRVTMTTDTSTSTAYMELRSLRSDD TAVYYCARAAAAVDYWGQGTLVTVSS
1163	ATX-P-3436	VH aa	QVQLQESGPGLVKPSETLSLSCTVSGGSVSSGSYYWSWIRQPPGKGL EWIGYIYYSGSTKYNPSLKSRVTISVDTSKNQVSLKLSSVTAADTAV YYCARDKGHWNYGAFDIWGQGTMVTVSS
1164	ATX-P-3437	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSNNWWSWVRQPPGKGL EWIGEIYHSGNINYNPSLKSRVTISVDKSKNQFSLKLSSVTAADTAVY YCARGGEYGDPVGYFDLWGRGTLVTVSS
1165	ATX-P-3440	VH aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTTYGISWVRQAPGQGLE WMGWISAYSGNTNYAQKLQGRVTMTTDTSTSTAYMELRSLRSDDT AVYYCARERVSNWVFDFWGQGTLVTVSS
1166	ATX-P-3442	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSDWWSWVRQPPGKGL EWIGEIYHSRNTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAADTAV YYCASGGVVADYYMDVWGKGTTVTVSS
1167	ATX-P-3444	VH aa	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYGMNWVRQAPGKGLE WVSSISGYGSYIYYAASVKGRFTISRDSAKNSLYLQMNSLSAEDTAV YYCARELGGIYYGVGYFDLWGRGTLVTVSS

1168	ATX-P-3447	VH aa	QVQLQESGPGLVKPSETLSLTCAVSGGSVSSGNYYWSWIRQPPGKG LEWIGYIYSSGSTNYNPSLKSRVTISIDTSKNQFSLKLSSVTAADTAV YYCARSPRGYSYGPFAYWGQGTLVTVSS
1169	ATX-P-3448	VH aa	QVQLQESGPGLVKPSQTLSLTCTVSGGSISSGGYNWNWIRQHPGKGL EWIGYINYSGNTYYNPSLKSRVTISVDTSKNQFSLKLSSVTAADTAV YYCARGPLDTAMAPFDYWGQGTLVTVSS
1170	ATX-P-3449	VH aa	QVQLQESGPGLVKPSETLSLTCTVSGDSISSYYWSWIRQPPGKGLEWI GYIYYSGFTKYNPSLKSRVTISVDTSKNQFSLRLSSVTAADTAVYYC ASVDSKWNYGSFHIWGQGTMVTVSS
1171	ATX-P-3450	VH aa	QVQLQESGPGLVKPSETLSLTCSVSGDSVSNNRYYWSWIRQPPGKGL EWIGYIYYSGSTNYNPSLKSRVTISVDTSKNQLSLNLSSVTAADTAV YYCARDRPSRYKWNYDAFAIWGQGTMVTVSS
1172	ATX-P-3451	VH aa	QVQLQQWGAGLLKPSETLSLTCAVYGGSFSDYYWTWIRQPPGKGLE WIGEVNHIGSTNYNPSLKSRVTISVDTSKNQFSLNLSSVTAADTAVY YCAKYSTSWYGWFDPWGQGTLVTVSS
1173	ATX-P-3453	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGDSISSNNWWSWFRQPPGKGL EWIGRIYHSGTTNYNPSLESRVTISVDNSRNQFSLKLSSVTAADTAVY YCARGEEWELRGGVFDIWGQGTMVTVSS
1174	ATX-P-3454	VH aa	QVQLVQSGPELKKPGASVKVSCKASGYTFTNYAVNWVRQAPGQGL EWMGWINTNTGHPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDT AVYYCARDSSSWGYWGQGTLVTVSS
1175	ATX-P-3455	VH aa	QVQLQESGPGLVTPSGTLSLTCAVSGDSISSDNWWSWVRQPPGKGL EWIGEIYHSENTNYNPSLKSRVTISVDKSKNQFSLRLNSVTAADTAM YYCARGRELTGLFDYWGQGTLVTVSS
1176	ATX-P-3456	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSNNWWSWVRQPPGKGL EWIGDIYHSGNTNYNPSLKSRVTLSVDMSKNQFSLKLNSVTAADTA VYYCARGGIAVTAYFDYWGQGTLVTVSS
1177	ATX-P-3458	VH aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYLHWVRQAPGQGL EWMGWINPHSGGTIYAQKFQDRVTMTRDTSISTAYMELSRLRSDDT AVYYCANWNSGDSYYYYMDVWGKGTTVTVSS
1178	ATX-P-3459	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSDNWWNWVRQPPGKGL EWIGKIYHSGNTNYNPSLKSRVTISVDESKNQFSLRLYSVTAADTAV YYCARGVDFWSGSHMDVWGKGTTVTVSS
1179	ATX-P-3462	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSNNWWSWVRQAPGKGL EWIGKIYQSGSTMYNPSLKSRVTMSVDKSKNQFSLILSSVTAADTAV YYCARDKPPLLGAFDYWGQGTLVTVSS
1180	ATX-P-3463	VH aa	QVQLVESGGGVVQPGRSLRLSCAASGFTFSSYAMHWVRQAPGKGL EWVAVISYDGSNKYYADSVKGRFTISRDNSKNTLSLQMNSLRAEDT AVYYCAKRGGYSYGPFEHWGQGTLVTVSS
1181	ATX-P-3466	VH aa	QVQLVQSGSELKKPGASVKVSCKASGYTFTSYTMNWVRQAPGQGL EWVGWINTATGTPTYAQGFTGRYVFSLDTSVSTAYLQISGLKAEDT AVYFCARYSGSHSFDYWGQGTLVTVSS
1182	ATX-P-3467	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSDYWWSWVRQSPGKGL EWIGKIYHSGNTNHNPSLKSRVTISIDKSRNQFSLNLNSVTAADTAVY YCAREGLELPHMDVWGKGTTVTVSS
1183	ATX-P-3468	VH aa	QVQLVESGGGLVQPGRSLRLSCAASGFTFSSYAMHWVRQAPGKGLE WVTVISYDGSNKYYADSVKGRFTISRDNSKNTLYLQMNSLRAEDTA VYYCAKRGNWNYGPFHYWGQGTLVTVSS
1184	ATX-P-3469	VH aa	QVQLVESGGGVVQPGRSLRLSCAASGFTFSAYAIHWVRQAPGKGLE WVAVISYDGSNKKYADSVKGRFTISRDNSKNTLDLEMNSLRAEDTA VYYCAKGLPFDYWGQGTLVTVSS
1185	ATX-P-3470	VH aa	QVQLVQSGSDLKKPGASVKVSCKASGYTFTSYTMNWVRQAPGQGL EWMGWINTNTGTPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTA VYYCTRYTGNYSFDYWGQGTLVTVSS

1186	ATX-P-3471	VH aa	EVQLVESGGVLVQPGGSLRLSCAASGFTFRSYAMSWVRQAPGKGLE WVSAISGSGDSTYFADSVKGRFTISRDNSKNTLSLQMNSLRAEDTAV YYCASILGYCSGTSCYGLFDNWGQGTLVTVSS
1187	ATX-P-3472	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQSPGKGL EWIGKIYHSEFTNYNPSLRSRVTISVDKSKNQFSLELTSVTAADTAVY YCAREYQNYMDVWGKGTTVTVSS
1188	ATX-P-3461	VH aa	QVQLQESGPGLVKPSGTLSLTCVVSGDSISSNNWWSWVRQPPGKGL EWIGQIYHSGITNYNPSLKSRVTISVDKSKNQFSLELTSVTAADAAVY YCARAQWELRAGWFDPWGQGTLVTVSS
1189	ATX-P-3466	VH aa	EVQLVESGGGLVKPGGTLTLSCAASGFTFSNAWMSWVRQAPGKGL EWVGRIKSKTDGGTTDYAAPVKGRFTISRDDSKNTLYLQMNSLKTE DTAVYYCTPRYNSDFDYWGQGTLVTVSS
1190	ATX-P-3476	VH aa	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPPGKGLEWI GYIYYSGFTKYNPSLKSRVTISVDTSKNQFSLKLSSVTAADTAVYYC ATHPRGYNYGPFDYWGQGTLVTVSS
1191	ATX-P-3477	VH aa	QVQLQESGPGLVKPSETLSLTCTVSGGSVNSGRYYWSWIRQPPGKG LEWIGYIYSSGYTNYNPSLKSRVTMLLDTSKNQFSLKLNSVTAADTA VYYCARSRGYRYGPFDYWGQGTLVTVSS
1192	ATX-P-3418	VH aa	QVQLVQSGSELKKPGASVKVSCEASGYTFTSYAMNWVRQAPGQGL EWMGWINTNTGTPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTA VYYCASHSTSFDYWGQGTLVTVSS
1193	ATX-P-3420	VH aa	QVQLQQWGAGLVKPSETLSLTCAVHGGSFSDYYLTWIRQPPGKGLE WIGEINHSGSTNYNPSLKSRVTLSIDTSKNQFSLKLSSVTAADTAVYY CARGSEDYYYYMDVWGKGTTVTVSS
1194	ATX-P-3426	VH aa	EVQLVQSGAEVKKPGESLKISCKGSGYIFTSYWIGWVRQMPGKGLE WMGIIYPGDSDTRYSPSFQGQVTISADKSIITAYLQWSSLKASDTAM YYCARHDYFDIGGYFDYWGQGTLVTVSS
1195	ATX-P-3432	VH aa	QVQLVQSGAEVKKPGASVKVSCKADGYTFTDYYMHWVRQAPGQG HEWMGWINPNSGVTYYAQKFQGRVTMTRDTSISTAYMELNRLRSD DTAVYYCARDRTFYFDYWGQGTLVTVSS
1196	ATX-P-3433	VH aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTDYYMHWVRQAPGQG LEWMGWINPNNGGTDYAQKFQGRVTMTRDTSISTAYMELHRLRSD DTAVYFCARGVYDVVVPTAIVNWFDPWGQGTLVTVSS
1197	ATX-P-3438	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGDSISNDYWWNWVRQPPGKGL EWIGEIYHSGHTNYNPSLKSRVTISVDKSKNQLSLKLTSVNAADTAV YYCARGGTEITGYMDVWGKGTTVTVSS
1198	ATX-P-3441	VH aa	QVQLQESGPGLVKPSGTLSLTCAVSGASIRSGHWWSWVRQPPGKGL EWIGEIYHSGNTNYNPSLKSRVTLSVDKSKNQFSLKLSSVTAADTAV YYCARGHYGDYVVYFDYWGQGTLVTVSS
1199	ATX-P-3446	VH aa	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPPGKGLEWI GYVYYSGYTKYNPSLKSRVTISIDASKNQFSLKLTSVTAADTAVYYC ATVESKWNYGPFAIWGQGTMVTVSS
1200	ATX-P-3452	VH aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYMNWVRQAPGQG LEWMGWINPNSGATNYAQKFQGRVTMTRDTSISTDYMELSRLRSD DTAVYYCARDGAKWNHEGYYFDYWGQGTLVTVSS

[00215] Table 8: Anti-C3 antibodies (VL sequences)

SEQ ID NO:	Antibody Name:	Descriptor:	Sequence:
1201	ATX-P-3360	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC

			GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1202	ATX-P-3362	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1203	ATX-P-3363	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1204	ATX-P-3365	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1205	ATX-P-3367	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1206	ATX-P-3369	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1207	ATX-P-3370	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1208	ATX-P-3371	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA

			AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1209	ATX-P-3373	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1210	ATX-P-3375	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1211	ATX-P-3378	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1212	ATX-P-3382	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1213	ATX-P-3383	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1214	ATX-P-3384	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1215	ATX-P-3386	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT

			ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1216	ATX-P-3387	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1217	ATX-P-3389	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1218	ATX-P-3391	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1219	ATX-P-3392	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1220	ATX-P-3395	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA
1221	ATX-P-3396	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA

1222	ATX-P-3397	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA
1223	ATX-P-3305	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA
1224	ATX-P-3306	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA
1225	ATX-P-3307	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA
1226	ATX-P-3308	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA
1227	ATX-P-3310	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA
1228	ATX-P-3312	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA

1229	ATX-P-3313	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA
1230	ATX-P-3314	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAGAATATTATT ACCTGGTTGGCTTGGTATCAGCAGAAACCAGGGAAAGCCCCTAA CCTCCTGATCTATAAGGCGTCTAGTTTAGAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACCAT CAGCAGCCTGCAGCCTGATGATTTTGCAACTTATTACTGCCAACA GTATAGTAGTTATTCGTACACTTTTGGCCAGGGGACCAAGCTGGA GATCAAA
1231	ATX-P-3319	VL nt	GCCATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGGGCATTAG AAATGATTTAGGCTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AGCTCCTGATCTATGCTGCATCCAGTTTACAAAGTGGGGTCCCAT CAAGGTTCAGCGGCAGTGGATCTGGCACAGATTTCACTCTCACCA TCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTATTACTGTCTAC AAGATTACAATTACCCGTGGACGTTCGGCCAAGGGACCAAGGTG GAAATCAAA
1232	ATX-P-3321	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGACTGTTTT GTACAGGTCCAACAATAAGAACTACTTAGCTTGGTATCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATATTATAGTACTCCGTGGACGTTC GGCCAAGGGACCAAGGTGGAAATCAAA
1233	ATX-P-3328	VL nt	GCCATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCTTCTGTAG GAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGGGCATTAGA AATGATTTAGGCTGGTATCAGCAGAATCCCGGGAAAGCCCCTAA GCTCCTGATTTATGCTGCATCCAATTTACAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGCACAGATTTCACTCTCACCAT CAGCAGCCTGCAGCCTGAAGATTTTGTTACTTATTACTGTCTACA AGATTACAATTGGCCGTGGACGTTCGGCCAAGGGACACGACTGG AGATTAAA
1234	ATX-P-3330	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCATTAG CAACTATTTAAATTGGTATCAACAGAAACCAGAGAAAGCCCCTA AGTTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCAT CAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCA TCAGCAGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAAC AGAGTTACAGTTCCCCGCTCACTTTCGGCGGAGGGACCAAGGTGG AGATCAAA
1235	ATX-P-3331	VL nt	GAAATTGTGTTGACTCAGTCTCCAGACTTTCAGTCTGTGACTCCA AAGGAGAAAGTCACCATCACCTGCCGGGCCAGTCAGAGCATTGG TAGTAACTTACACTGGTTCCAGCAGAAACCAGATCAGTCTCCAAA ACTCCTCATCAAGTATGCTTCCCAGTCCTTCTCAGGGGTCCCCTCG AGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACCCTCACCATC AATAGCCTGGAAGCTGAAGATGCTGCAATGTATTACTGTCATCAG AGTAGTAGTTTACCTCGGACGTTCGGCCAAGGGACCAAGGTGGA AATCAAA

1236	ATX-P-3335	VL nt	GCCATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGGGCATTAG AAATGATTTAGGCTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AGCTCCTGATCTATGCTGCATCCAGTTTACAAAGTGGGGTCCCAT CAAGGTTCAGCGGCAGTGGATCTGGCACAGATTTCACTCTCACCA TCAGCAGCCTGCAGCCTGAAGATTTTGCATCTTATTACTGTCTAC AAGATTACAATTGGCCGTACACTTTTGGCCAGGGGACCAAGCTGG AGATCAAA
1237	ATX-P-3336	VL nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCA GGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAG AAGCAGCTACTTTGCCTGGTACCAGCAGAAACCTGGCCAGGCTCC CAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCC AGACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCAC CATCAGCAGACTGGAGCCTGAAGATTTTGCAGTGTATTACTGTCA GCAGTATGGTAGCTCACCTCGGACGTTCGGCCAAGGGACCAAGG TGGAAATCAAA
1238	ATX-P-3337	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATATTTTGGTACTCCTCGGACGTTCG GCCAAGGGACCAAGGTGGAAATCAAA
1239	ATX-P-3340	VL nt	GAAATTGTGTTGACACAGTCTCCAGCCACCCTGTCTTTGTCTCCA GGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAG CAGCTACTTAGCCTGGTACCAACAGAAACCTGGCCAGGCTCCCAG GCTCCTCATCTATGATGCATCCAACAGGGCCACTGGCATCCCAGC CAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCACCAT CAGCAGCCTGCAGTCTGAAGATTTTGCAGTTTATTACTGTCAGCA GCGTAGCAATTGGCCGCTCACTTTCGGCGGAGGGACCAAGGTGG AGATCAAA
1240	ATX-P-3342	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGACCATTAG GAGCTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCAT CAAGGTTCAGTGGCAGTGGATCTGGGACAAATTTCACTCTCACCA TCAGCAGTCTGCAACCTGAAGATTTTGCAACTTACTCCTGTCAAC AGAGTTACACTACCCCGCTCACTTTCGGCGGAGGGACCAAGGTG GAGATCAAA
1241	ATX-P-3344	VL nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCA GGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTATTAG CAGCAGCTACTTAGCCTGGTACCAGCGGGAACCTGGCCAGGCTCC CAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCC AGACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCAC CATCAGCAGACTGGAGCCTGAAGATTTTGTAGTGTATTACTGTCA ACAATATGGTAGCTCACCGATCACCTTCGGCCAAGGGACACGACT GGAGATTAAA
1242	ATX-P-3347	VL nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCA GGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTCG CAGCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCC CAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCC AGACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCAC CTTCAGCAGACTGGAGCCTGAAGATTTTGCAGTGTATTACTGTCA GCAGTATGGTAGCTCACCGTACACTTTTGGCCAGGGGACCAAGCT GGAGATCAAA

1243	ATX-P-3348	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCAGGCGAGTCAGGACATTAG CAACTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AGCTCCTGATCTACGATGCATCCAATTTGGAAACAGGGGTCCCAT CAAGGTTCAGTGGAAGTGGATCTGGGACAGATTTTACTTTCACCA TCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAAC AGGCTAACAGTTTCCCGCTCACTTTCGGCGGAGGGACCAAGGTGG AGATCAAA
1244	ATX-P-3349	VL nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCA GGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAG CAGCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCC CAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCC AGACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCAC CATCAGCAGACTGGAGCCTGAAGATTTTGCAGTGTATTACTGTCA GCAGTATGGTAGCTCACCATTCACTTTCGGCCCTGGGACCAAAGT GGATATCAAA
1245	ATX-P-3350	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATATTATAGTACTCCGTGGACGTTC GGCCAAGGGACACGACTGGAGATTAAA
1246	ATX-P-3351	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCGAGTCAGGACATTAG CAACTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AGCTCCTGATCTATGCTGCATCCAGTTTGGAAAGTGGGGTCCCAT CAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCA TCAGCAGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAAC AGAGTTACAGTACCCCTACTTTCGGCGGAGGGACCAAGGTGGAG ATCAAA
1247	ATX-P-3353	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGGTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGCCAGCCTCCTAAACTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATATTATGGTACTCCTCGGACGTTC GGCCAAGGGACCAAGGTGGAAATCAAA
1248	ATX-P-3354	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCAGGCGAGTCAGGACATTAA GAACTGTTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AGCTCCTGATCTACGATGCATCCAATTTGGAAACAGGGGTCCCAT CAAGGTTCAGTGGAAGTGGATCTGGGACAGATTTTACTTTCACCA TCAGCAGCCTGCAGCCTGAAGATATTGCAACATATTACTGTCAAC AGTTTGATAATCTCCCTCTCACTTTCGGCGGAGGGACCAAGGTGG AGATCAAA
1249	ATX-P-3355	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGACTATTTT ATACAGGTCCAACATTAAGAACTACTTAGCTTGGTACCAGCAGAA ACCAGGACAGCCTCCTAAACTGCTCATTTCCTGGGCATCTACCCG GGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCGGACGTTCGGCC AGGGGACCAAGCTGGAGATCAAA

1250	ATX-P-3356	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATATTATAGTACTCCTCGGACGTTC GGCCAAGGGACCAAGGTGGAAATCAAA
1251	ATX-P-3358	VL nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATCTGTA GGAGACAGAGTCACTATCACTTGTCGGGCGAGTCAGGGTATTAG CAGCTGGTTAGCCTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AACTCCTGATCTATGCTGCATCCAGTTTGCAGAGTGGGGTCCCAT CAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCA TCAGCAGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAAC AGGCTAACAGTTTCCCTCTCACTTTCGGCGGAGGGACCAAGGTGG AGATCAAA
1252	ATX-P-3359	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATATTATAGTACTCCTCCGACGTTCG GCCAAGGGACCAAGGTGGAAATCAAA
1253	ATX-P-3362	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCATTAG CAGCTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCAT CAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCA TCAGCAGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAAC AGAGTTACAGTACCCCGTACACTTTTGGCCAGGGGACCAAGCTGG AGATCAAA
1254	ATX-P-3363	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATTTTATGATACTCCTCGGACGTTCG GCCAAGGGACCAAGGTGGAAATCAAA
1255	ATX-P-3366	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCGAGTCAGGGCATTAG CAATTATTTAGCCTGGTATCAGCAGAAACCAGGGAAAGTTCCTAA GCTCCTGATCTATGTTGCATCCACTTTGCAATCAGGGGTCCCATCT CGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATC AGCAGCCTGCAGCCTGAAGATGTTGCAACTTATTACTGTCAAAAT TATATCAGTGCCCCGCTCACTTTCGGCGGAGGGACCAAGGTGGAG ATCAAA
1256	ATX-P-3367	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATATTATAGTACTCCGTGGACGTTC GGCCAAGGGACCAAGGTGGAAATCAAA

1257	ATX-P-3368	VL nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCA GGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAG CAGCAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCC CAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCC AGACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCAC CATCAGCAGACTGGAGCCTGAAGATTTTGCAGTGTATTACTGTCA GCAGTATGGTAGCTCACCGTACACTTTTGGCCAGGGGACCAAGCT GGAGATCAAA
1258	ATX-P-3369	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCAACATCACTTGCCGGGCGAGTCAGGGCATTAG CAATTATTTAGCCTGGTATCAGCAGAAACCAGGGAAAGTTCCTAA GCTCCTGATCTATGCTGCATCCACTTTGCAATCAGGGGTCCCATCT CGTTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATC AGCAGCCTGCAGCCTGAAGATGTTGCAAGTTATTTCTGTCAAAAA TATATCAGTGCCCCGCTCACTTTCGGCGGAGGGACCAAGGTGGAG ATCAAA
1259	ATX-P-3370	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCGAGTCAGGGCATTAG CAATTATTTAGCCTGGTATCAGCAGAAACCAGGGAAAGTTCCTAA GCTCCTGATCTATGCTGCATCCACTTTGCAATCAGGGGTCCCATCT CGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATC AGCAGCCTGCAGCCTGAAGACGTTGCAAGTTATTACTGTCAAGAT TATACCAGTGCCCCGCTCACTTTCGGCGGAGGGACCAAGGTGGA GATCAAA
1260	ATX-P-3371	VL nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCA GGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAG TGACAGCTACTTAGCCTGGTACCAGCAGGAACCTGGCCAGGCGC CCAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCC CAGACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCA CCATCAGCAGACTGGAGCCTGAAGATTTTGCATTATATTACTGTC AGCAATATGATTCCTCGCCATTCACTTTCGGCCCTGGGACCAAAG TGGATATCAAA
1261	ATX-P-3472	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTG GCCAGGGGACCAAGCTGGAGATCAAA
1262	ATX-P-3361	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1263	ATX-P-3366	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA

1264	ATX-P-3376	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1265	ATX-P-3377	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTAACC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCTCCGGGTCTGGGA CAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTGG CAGTTTATTACTGTCAGCAATATTATAGTACTCCGTACACTTTTGG CCAGGGGACCAAGCTGGAGATCAAA
1266	ATX-P-3418	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACCTGCCGGGCAAGTCAGACCATTAG AAACTTTTTAAATTGGTATCAGCGGAAACCAGGGAAAGCCCCTA AGATCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCAT CAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCA TCAGCAGTCTGCAACCTGCAGATTTTGCAACTTACTACTGTCAAC AGACTTACAGTATCCCGATCACCTTCGGCCAAGGGACACGACTGG AGATTAAA
1267	ATX-P-3420	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCATTAG CAGGTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AACTCCTGCTCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCAT CAAAGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCA TCAGCAGCCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAAC AGAGTTACAGTTCCCCGATCACCTTCGGCCAAGGGACACGACTGG AGATTAAA
1268	ATX-P-3426	VL nt	GATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCCTG GAGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGAGCCTCCTGC ATAGTAATGGATACAACTATTTGGATTGGTACCTGCAGAAGCCAG GGCAGTCTCCACAGCTCCTGATCTATTTGGGTTCTAATCGGGCCT CCGGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAGGCACAGAT TTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTTGGGGT TTATTACTGCATGCAAACTCTACAAACTCCTCCGACGTTCGGCCA AGGGACCAAGGTGGAAATCAAA
1269	ATX-P-3432	VL nt	GACATCCAGTTGACCCAGTCTCCATCCTTCCTGTCTGCATCTGTAG GAGACAGACTCACCATCACTTGCCGGGCCAGTCAGGGCATTAGC AGTTATTTAGCCTGGTATCAGCAAAAACCAGGGAAAGCCCCTAA GCTCCTGATCTATACTGCATCCACTTTACAAAGTGGGGTCCCATC AAGGTTCAGCGGCAGTGGATCTGGGACAGAATTCACTCTCACAAT CAGCAGCCTGCAGCCTGAAGATTTTGCAACTTATTACTGTCAACA GCTTAATGGTTACCCTCCGACGTTCGGCCAAGGGACCAAGGTGGA AATCAAA
1270	ATX-P-3433	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCATTAC CAGCTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTA AGCTCCTGATCTTTGCTGCATCCAGTTTGCAAAGTGGGGTCCCAT CAAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCA TCAGCAGTCTGCAACCTGAAGATTTTGCAACTTACTACTGTCAAC AGAGTTACAGTACCCCTCTCACTTTCGGCGGAGGGACCAAGGTGG AGATCAAA

1271	ATX-P-3438	VL nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTCTCTG GGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAGAGTGTTTT ATACAGCTCCAACAATAAGAACTACTTAGCTTGGTACCAGCAGA AACCAGGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCC GGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCGGGTCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGGCTGAAGATGTG GCAGTTTATTACTGTCAGCAATATTATAGTACTCCTCGGACGTTC GGCCAGGGGACCAAGGTGGAAATCAAA
1272	ATX-P-3441	VL nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCTGTA GGAGAAAGAGTCACCATCACTTGCCGGGCAAGTCAGAGCATTAG CAGCTATTTAAATTGGTATCAGCAGAAACCAGGGAAAGCCCCTA ACCTCCTGATCTATGCTGCATCCAGTTTCCAAAGTGGGGTCCCAT CAAGGGTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCA TCAGCAGTCTGCAACCTGAGGATTTTGCAACTTACTACTGTCAAC AGAGTTACAGTAACCCGTACACTTTTGGCCAGGGGACCAAGCTG GAGATCAAA
1273	ATX-P-3446	VL nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTCTCCA GGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGAGTGTTAG TAGAAGCTACTTAGCCTGGTACCAGCAGAAACCTGGCCAGGCTCC CAGGCTCCTCATCTATGGTGCATCCAGCAGGGCCACTGGCATCCC AGACAGGTTCAGTGGCAGTGGGTCTGGGACAGACTTCACTCTCAC CATCAGCAGACTGGAGCCTGAAGATTTTGCAGTGTATTACTGTCA GCAGTATGGTAGCTCACCGTGGACGTTCGGCCAAGGGACCAAGG TGGAAATCAAA
1274	ATX-P-3452	VL nt	GATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACCCCTG GAGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGATCCTCCTGC ATACTAATGGATACAACTATTTGGATTGGTACCTGCAGAAGCCAG GGCAGTCTCCTCAGCTCCTGATCTATTTGGGTTCTTATCGGGCCTC CGGGGTCCCTGACAGGTTCAGTGGCAGTGGATCAGGCACAGATTT TACACTGAAAATCAGCAGAGTGGAGGCTGGGGATGTTGGGCTTT ATTACTGCATGCAAGCTCTACAAACTCCGCTCACTTTCGGCGGAG GGACCAAGGTGGAGATCAAA
1275	ATX-P-3360	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1276	ATX-P-3362	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1277	ATX-P-3363	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1278	ATX-P-3365	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1279	ATX-P-3367	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1280	ATX-P-3369	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1281	ATX-P-3370	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK

1282	ATX-P-3371	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1283	ATX-P-3373	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1284	ATX-P-3375	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1285	ATX-P-3378	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1286	ATX-P-3382	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1287	ATX-P-3383	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1288	ATX-P-3384	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1289	ATX-P-3386	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1290	ATX-P-3387	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1291	ATX-P-3389	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1292	ATX-P-3391	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1293	ATX-P-3392	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1294	ATX-P-3395	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1295	ATX-P-3396	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1296	ATX-P-3397	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1297	ATX-P-3405	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1298	ATX-P-3406	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1299	ATX-P-3407	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK

1300	ATX-P-3408	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1301	ATX-P-3410	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1302	ATX-P-3412	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1303	ATX-P-3413	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1304	ATX-P-3414	VL aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKAPNLLI YKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYCQQYSSYSY TFGQGTKLEIK
1305	ATX-P-3419	VL aa	AIQMTQSPSSLSASVGDRVTITCRASQGIRNDLGWYQQKPGKAPKLL IYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCLQDYNYP WTFGQGTKVEIK
1306	ATX-P-3421	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQTVLYRSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQYYSTPWTFGQGTKVEIK
1307	ATX-P-3428	VL aa	AIQMTQSPSSLSASVGDRVTITCRASQGIRNDLGWYQQNPGKAPKLL IYAASNLQSGVPSRFSGSGSGTDFTLTISSLQPEDFVTYYCLQDYNWP WTFGQGTRLEIK
1308	ATX-P-3430	VL aa	DIQMTQSPSSLSASVGDRVTITCRASQSISNYLNWYQQKPEKAPKFLI YAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYSSPLT FGGGTKVEIK
1309	ATX-P-3431	VL aa	EIVLTQSPDFQSVTPKEKVTITCRASQSIGSNLHWFQQKPDQSPKLLIK YASQSFSGVPSRFSGSGSGTDFTLTINSLEAEDAAMYYCHQSSSLPRT FGQGTKVEIK
1310	ATX-P-3435	VL aa	AIQMTQSPSSLSASVGDRVTITCRASQGIRNDLGWYQQKPGKAPKLL IYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFASYYCLQDYNWP YTFGQGTKLEIK
1311	ATX-P-3436	VL aa	EIVLTQSPGTLSLSPGERATLSCRASQSVRSSYFAWYQQKPGQAPRLL IYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQQYGSSPR TFGQGTKVEIK
1312	ATX-P-3437	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQYFGTPRTFGQGTKVEIK
1313	ATX-P-3440	VL aa	EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLI YDASNRATGIPARFSGSGSGTDFTLTISSLQSEDFAVYYCQQRSNWPL TFGGGTKVEIK
1314	ATX-P-3442	VL aa	DIQMTQSPSSLSASVGDRVTITCRASQTIRSYLNWYQQKPGKAPKLLI YAASSLQSGVPSRFSGSGSGTNFTLTISSLQPEDFATYSCQQSYTTPLT FGGGTKVEIK
1315	ATX-P-3444	VL aa	EIVLTQSPGTLSLSPGERATLSCRASQSISSSYLAWYQREPGQAPRLLI YGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFVVYYCQQYGSSPIT FGQGTRLEIK
1316	ATX-P-3447	VL aa	EIVLTQSPGTLSLSPGERATLSCRASQSVRSSYLAWYQQKPGQAPRL LIYGASSRATGIPDRFSGSGSGTDFTLTFSRLEPEDFAVYYCQQYGSS PYTFGQGTKLEIK
1317	ATX-P-3448	VL aa	DIQMTQSPSSLSASVGDRVTITCQASQDISNYLNWYQQKPGKAPKLL IYDASNLETGVPSRFSGSGSGTDFTFTISSLQPEDFATYYCQQANSFPL TFGGGTKVEIK

1318	ATX-P-3449	VL aa	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQAPRLL IYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQQYGSSPF TFGPGTKVDIK
1319	ATX-P-3450	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQYYSTPWTFGQGTRLEIK
1320	ATX-P-3451	VL aa	DIQMTQSPSSLSASVGDRVTITCRASQDISNYLNWYQQKPGKAPKLL IYAASSLESGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYSTPT FGGGTKVEIK
1321	ATX-P-3453	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYRSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQYYGTPRTFGQGTKVEIK
1322	ATX-P-3454	VL aa	DIQMTQSPSSLSASVGDRVTITCQASQDIKNCLNWYQQKPGKAPKLL IYDASNLETGVPSRFSGSGSGTDFTFTISSLQPEDIATYYCQQFDNLPL TFGGGTKVEIK
1323	ATX-P-3455	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQTILYRSNIKNYLAWYQQKPG QPPKLLISWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYCQ QYYSTRTFGQGTKLEIK
1324	ATX-P-3456	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQYYSTPRTFGQGTKVEIK
1325	ATX-P-3458	VL aa	DIQMTQSPSTLSASVGDRVTITCRASQGISSWLAWYQQKPGKAPKLL IYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQANSFPL TFGGGTKVEIK
1326	ATX-P-3459	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQYYSTPPTFGQGTKVEIK
1327	ATX-P-3462	VL aa	DIQMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPGKAPKLLI YAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYSTPY TFGQGTKLEIK
1328	ATX-P-3463	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQFYDTPRTFGQGTKVEIK
1329	ATX-P-3466	VL aa	DIQMTQSPSSLSASVGDRVTITCRASQGISNYLAWYQQKPGKVPKLL IYVASTLQSGVPSRFSGSGSGTDFTLTISSLQPEDVATYYCQNYISAPL TFGGGTKVEIK
1330	ATX-P-3467	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQYYSTPWTFGQGTKVEIK
1331	ATX-P-3468	VL aa	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQAPRLL IYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQQYGSSPY TFGQGTKLEIK
1332	ATX-P-3469	VL aa	DIQMTQSPSSLSASVGDRVNITCRASQGISNYLAWYQQKPGKVPKLL IYAASTLQSGVPSRFSGSGSGTDFTLTISSLQPEDVASYFCQKYISAPL TFGGGTKVEIK
1333	ATX-P-3470	VL aa	DIQMTQSPSSLSASVGDRVTITCRASQGISNYLAWYQQKPGKVPKLL IYAASTLQSGVPSRFSGSGSGTDFTLTISSLQPEDVASYYCQDYTSAP LTFGGGTKVEIK
1334	ATX-P-3471	VL aa	EIVLTQSPGTLSLSPGERATLSCRASQSVSDSYLAWYQQEPGQAPRLL IYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFALYYCQQYDSSPF TFGPGTKVDIK
1335	ATX-P-3472	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQYYSTPYTFGQGTKLEIK

1336	ATX-P-3361	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1337	ATX-P-3366	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1338	ATX-P-3376	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1339	ATX-P-3377	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYY CQQYYSTPYTFGQGTKLEIK
1340	ATX-P-3418	VL aa	DIQMTQSPSSLSASVGDRVTITCRASQTIRNFLNWYQRKPGKAPKILI YAASSLQSGVPSRFSGSGSGTDFTLTISSLQPADFATYYCQQTYSIPIT FGQGTRLEIK
1341	ATX-P-3420	VL aa	DIQMTQSPSSLSASVGDRVTITCRASQSISRYLNWYQQKPGKAPKLL LYAASSLQSGVPSKFSGSGSGTDFTLTISSLQPEDFATYYCQQSYSSPI TFGQGTRLEIK
1342	ATX-P-3426	VL aa	DIVMTQSPLSLPVTPGEPASISCRSSQSLLHSNGYNYLDWYLQKPGQS PQLLIYLGSNRASGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCMQ TLQTPPTFGQGTKVEIK
1343	ATX-P-3432	VL aa	DIQLTQSPSFLSASVGDRLTITCRASQGISSYLAWYQQKPGKAPKLLI YTASTLQSGVPSRFSGSGSGTEFTLTISSLQPEDFATYYCQQLNGYPP TFGQGTKVEIK
1344	ATX-P-3433	VL aa	DIQMTQSPSSLSASVGDRVTITCRASQSITSYLNWYQQKPGKAPKLLI FAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYCQQSYSTPLT FGGGTKVEIK
1345	ATX-P-3438	VL aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKP GQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQAEDVAVYYC QQYYSTPRTFGQGTKVEIK
1346	ATX-P-3441	VL aa	DIQMTQSPSSLSASVGERVTITCRASQSISSYLNWYQQKPGKAPNLLI YAASSFQSGVPSRVSGSGSGTDFTLTISSLQPEDFATYYCQQSYSNPY TFGQGTKLEIK
1347	ATX-P-3446	VL aa	EIVLTQSPGTLSLSPGERATLSCRASQSVSRSYLAWYQQKPGQAPRL LIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYYCQQYGSSP WTFGQGTKVEIK
1348	ATX-P-3452	VL aa	DIVMTQSPLSLPVTPGEPASISCRSSQILLHTNGYNYLDWYLQKPGQS PQLLIYLGSYRASGVPDRFSGSGSGTDFTLKISRVEAGDVGLYYCMQ ALQTPLTFGGGTKVEIK

[00216] Table 9: Anti-C3 antibodies (HC IgG1 Fc sequences)

SEQ ID NO:	**Antibody Name:**	**Descriptor:**	**Sequence:**
1349	ATX-P-3360	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCATTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGGG AAGGGGCTGGAGTGGCTTGGAAAAATCTATCATAGTGGGAAC ACCGACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAG TAGACAAGTCCAAGAATCAGTTCTCCCTGAGGCTGAGTTCTGT GACCGCCGCGGACACGGCCGTATATTATTGTGCGAGCGGAAG CGATTACGATTTTTGGAGTGGTTATTTGGACTACTGGGGCCAG GGAACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTT CTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGG GACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAG

			CCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGT GTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATA GCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACT CACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTG TCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATG GTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGC AGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCT TCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGT AAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCC AAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTT CCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTA CGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAA TGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACG CCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACAC GCAGAAATCTCTTAGTCTTTCACCCGGT
1350	ATX-P-3362	HC IgG1 Fc nt	GAAGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCT GGCAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TTGATGATTATGCCATGCACTGGGTCCGGCAAGCTCCAGGGAA GGGCCTGGAGTGGGTCTCAGGTATTAGTTGGAATAGTGGTAGC ATAGCCTATGCGGACTCTGTGAAGGGCCGATTCACCATCTCCA GAGACAACGCCAAGAACTCCCTGTATCTGCAAATGAACAGTCT GAGAGTTGAGGACACGGCCTTTTTTTACTGTGCAAGAGTCGCA GCAGCAGCTGGTATCCCTTTCTTTGACTACTGGGGCCAGGGAA CCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGT ATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAG TTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGC ACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTC AGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGA CGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGT GGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGC GTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCA GCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCA CGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTA GAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1351	ATX-P-3363	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCTGGGACCCTGACCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAACAGGGATAACTGGTGGAGTTGGGTCCGCCAGCCCCCGGG

			GAAGGGGCTGGAGTGGATTGGACAAATCTATCAGAGTGGGAG CACCAACTACAACCCGTCCCTCAAGAGTCGGGTCACCATATCA GTCGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAGTTCTG TGACCGCCGCGGACACGGCCGTATATTACTGTGCGAGAGTATA TGACTGGAACTACGGGGGTCACTTTGACTACTGGGGCCAGGG AACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCT GTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGA CAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCC AGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGT GCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGC CTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTC AGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCA CACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCC AGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGA TCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTC CCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAG TACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCA CCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAG CAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAG GCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGC CTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTG TCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGG AATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCAC CCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACT GACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAG TTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAG AAATCTCTTAGTCTTTCACCCGGT
1352	ATX-P-3365	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCAT CAGCAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGATTGGACAAATCTATCATAGTGGCCA CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCG GTTGACATGTCCAAGAACCAGTTCTCCCTGAAGCTGACCTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGGGGGG CTACAGAAATTCTGGGGTACTTCGATCTCTGGGGCCGTGGCAC CCTGGTCACTGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTA TTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAG CCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGT TACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCA CACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCA GCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACA TGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCG TGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAG CCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACG CCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCA AGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAA TAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCC AAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTT CTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCT GGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAA

			TCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCC GTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGA CTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTG CTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAA TCTCTTAGTCTTTCACCCGGT
1353	ATX-P-3367	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCGT CAGCAGTGGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCA GGGAAGGGACTGGAGTGGATTGGATATATCTATAAAAGTGGG TTCACCAATTACAACCCCTCCCTCAAGAGTCGAGTCACCATAT CAGTAGACACGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTC TGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGATAGGG GGACGTGGATACAGCTATGGTCCTTTTGACTACTGGGGCCAGG GAACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTC TGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGG ACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGC CAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTG TGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAG CCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACT CAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAA AAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTC ACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCC CAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATG ATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCA GTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTC ACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAA GCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAA GGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCC GCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACG TGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATG GGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCC ACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAA CTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCA GTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCA GAAATCTCTTAGTCTTTCACCCGGT
1354	ATX-P-3369	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCT TCACCGGCTACTATTTACACTGGGTGCGACAGGCCCCTGGACA AGGACTTGAGTGGATGGGATGGATCAACCCTAACAGTGGTGA CACAAACTATGTACAGAACTTTCAGGGCAGGGTCACCATGACC AGGGACACGTCCATCAGCACAGCCTACATGGAGCTGAGCAGG CTGAGATCTGACGACACGGCCGTGTATTACTGTGCGAGATCCT ACGTGGATACCAGCTCGTCGGCTTTTGATATCTGGGGACAAGG GACAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCT GTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGA CAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCC AGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGT GCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGC CTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTC AGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCA CACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCC AGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGA TCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTC

			CCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAG TACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCA CCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAG CAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAG GCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGC CTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTG TCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGG AATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCAC CCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACT GACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAG TTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAG AAATCTCTTAGTCTTTCACCCGGT
1355	ATX-P-3370	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCAT CAGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCCGGGAA GGGACTGGAGTGGATTGGGTATGTCTATTACAGTGGGTACACC AAGTACAACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTAG ACACGCCCAAGACCCAGTTCTCCCTGAAGATGAGCTCTGTGAC CGCTGCGGACACGGCCGTGTATTACTGTGCGAGCGTCGAATCA AAGTGGAACTACGGGCCTTTTGATATCTGGGGACAAGGGACA ATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTAT TTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGC CGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTT ACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCAC ACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCA GCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACA TGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCG TGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAG CCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACG CCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCA AGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAA TAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCC AAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTT CTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCT GGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAA TCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCC GTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGA CTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTG CTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAA TCTCTTAGTCTTTCACCCGGT
1356	ATX-P-3371	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGACTCCAT CAGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCAGGGAA GGGACTGGAGTGGATTGGATATATCTATTACAGTGGGTTCACC AAGTACAACCCCTCCCTCAACAGTCGAGTCACCATATCAGTAG ACACGTCCAAGAGCCAGTTCTCCCTGAAGCTGACCTCTGTGAC CGCTGCGGACACGGCCGTGTATTACTGTGCGATGAGAGAGCC GAGAGGCCGGTATAACTGGAACTACGGGCCTTTTGATATCTGG GGACAAGGGACAATGGTCACCGTCTCTTCAGCTAGCACTAAA GGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTC GGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTC

			CCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACA AGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCT TGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTG GGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAA ATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATA AAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGG TGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACT CTAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTG ACGTGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGT TGATGGTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGA GGAGCAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACC GTCCTTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCA AGGTAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCA TTTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATA CTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATC CCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTG TTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAA CAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTA TAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAA TGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACT ACACGCAGAAATCTCTTAGTCTTTCACCCGGT
1357	ATX-P-3373	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGTAATGATAACTGGTGGAGTTGGGTCCGCCAGCCCCCCGGG AAGGGACTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTC ACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAG TAGACAAGTCCAAGAACCAGTTCTCCCTGGAGCTGAACTCTGT GACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGAGTA TCATAATTTCATGGACGTCTGGTGCAAAGGGACCACGGTCACC GTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGC CCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGG TTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTT GGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGC CGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTC ACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTGCA ATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACGCG TAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGCCATG CCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTGTTC CCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGCCAG AGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCCGA AGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAAT GCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATC GTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAA CGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCC GGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACC AAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTT TTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCA GCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGATAG CGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATAAA TCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTATGC ATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGTCT TTCACCCGGT
1358	ATX-P-3375	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGACTCCGT CAGCAGTGGTAAATACTTCTGGAGCTGGATCCGGCAGTCCCCA

			GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGG AGCACCAACTACAACCCCTCCCTCAAGAATCGAGTCACCATAT CGGTAGACACGTCCAAGAAGGAGTTGTCTCTGAAGCTGAGTTC TGTGACCGCTGCGGACACGGCCGTTTATTACTGTGCGAGAGGA GGGCATAACTGGAACTACGCTGCTTTTGATATCTGGGGACAAG GGACAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTC TGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGG ACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGC CAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTG TGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAG CCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACT CAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAA AAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTC ACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCC CAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATG ATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCA GTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTC ACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAA GCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAA GGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCC GCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACG TGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATG GGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCC ACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAA CTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCA GTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCA GAAATCTCTTAGTCTTTCACCCGGT
1359	ATX-P-3378	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGTAATGATAACTGGTGGAGTTGGGTCCGCCAGTCCCCCGGG AAGGGGTTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTC ACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAG TAGACAAGTCCAAGAACCAGTTCTCCCTGGAGCTGAGCTCTGT GGCCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGAGTA TGAGAACTTCATGGACGTCTGGGGCAAGGGGACCACGGTCAC CGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGG CCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGG GTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAG TTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCT GCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGG TCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTG CAATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACG CGTAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGCC ATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTG TTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGC CAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCC CGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACAC AATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACC TATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGC TTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCAC TTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCA ACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAG GAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAG GTTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGG

			TCAGCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGAT AGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATA AATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTAT GCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGT CTTTCACCCGGT
1360	ATX-P-3382	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCAT CAGCAGTAATAGCTGGTGGAATTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGATTGGGCAAATCTTTCATAGTGGACA CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATGTCT ATAGACAAGTCCAAGAACCAGTTCTCCCTGAAACTGACCTCTG TGACCGCCGCGGACACGGCCCTGTATTACTGTGCGAGAGGAG GGGAGTATGAAAACTCGGCGAACTGGTTCGACCCCTGGGGCC AAGGAACCCTGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCC TTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGA GGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTG AGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTG GTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTAT AGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCA CTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATAC AAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAAC TCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGT CCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGT GTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGAT GGTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAG CAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCC TTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGG TAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTC CAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCT TCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTT ACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGA ATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAAC GCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGC AAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTA TTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACA CGCAGAAATCTCTTAGTCTTTCACCCGGT
1361	ATX-P-3383	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGTCTCCAT CAACAAGGATAACTGGTGGACTTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGATTGGGAAAATCTATCATAGTGGGAG CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAACTCCAAGAACCAATTCTCCCTGAAGCTGAACTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTACGAGAGGGG GGGATATAGCTATGGAGGGGGACTGGTTCGCCCCCTGGGGCC AGGGAACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCC TTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGA GGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTG AGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTG GTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTAT AGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCA CTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATAC AAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAAC TCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGT CCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGT

			GTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGAT GGTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAG CAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCC TTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGG TAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTC CAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCT TCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTT ACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGA ATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAAC GCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGC AAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTA TTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACA CGCAGAAATCTCTTAGTCTTTCACCCGGT
1362	ATX-P-3384	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTGATAACTGGTGGAATTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGCTTGGAAAAATCTATCATAGTGGGAA CACCGACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAATCAGTTCTCCCTGAGGCTGAGTTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGTG GAACTGAAACTACGGGGTACATGGACGTCTGGGGCAAAGGGA CCACGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGT ATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAG TTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGC ACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTC AGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGA CGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGT GGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGC GTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCA GCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCA CGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTA GAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1363	ATX-P-3386	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAATGATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAATGGATTGGGAAAATCTATCATAGTGGGTT CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAACTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGGG GGGATAACTTTATGGAGGGGGAGGGGTTAGGGACCTGGGGCC CGGGAACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCC TTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGA GGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTG

			AGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTG GTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTAT AGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCA CTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATAC AAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAAC TCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGT CCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAA TGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGT GTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGAT GGTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAG CAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCC TTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGG TAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTC CAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCT TCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTT ACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGA ATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAAC GCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGC AAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTA TTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACA CGCAGAAATCTCTTAGTCTTTCACCCGGT
1364	ATX-P-3387	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAATGATAACTGGTGGAATTGGGTCCGCCAGTCCCCAGG GAAGGGGCTGGAGTGGATTGGAAAAATCTATCATAGTGGGTT CACCGACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTG TGACCGCCGCGGACACGGCCGTGTATTATTGTGCGAGAGGAA ACCATAACTATTTGTGGATTGGGTATTTGGGGACCTGGGGCCC GGGAACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCT TCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAG GGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGA GCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGG TGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATA GCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACT CACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTG TCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATG GTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGC AGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCT TCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGT AAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCC AAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTT CCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTA CGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAA TGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACG CCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACAC GCAGAAATCTCTTAGTCTTTCACCCGGT
1365	ATX-P-3389	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCATCTGCGCTGTCTCTGGTGGCTCCAT CAGTAGTAGTAATTGGTGGAGTTGGGTCCGCCAGCCCCCAGGG

			AAGGGGCTGGAGTGGATTGGGAGAATCTATCATAGTGGGCAC ACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAG TAGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGACCTCTGT GACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGGAG GGACTTAACTGGATACTTTGACTACTGGGGCCAGGGAACCCTG GTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCC CTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGC CCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACC GTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACG TTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTC TGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTAT ATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGATA AACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATGCC CGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTT CCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGT ACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAG ATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGT ACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTC GACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGAT TGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAA GCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAA GGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTC GTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGT TAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCG AACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCGTC CTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTG TAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTC CGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAATCT CTTAGTCTTTCACCCGGT
1366	ATX-P-3391	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAACCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGTAATGATAACTGGTGGAGTTGGGTCCGCCAGTCCCCCGGG AAGGGGCTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTC ACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAG TAGACAAGTCCAAGAACCAGTTCTCCCTGGAGCTGAGCTCTGT GACCGCCGCGGACACGGCCGTATATTACTGTGCGAGAGGGGT CGATTTTTGGAGTGGTTCCCACATGGACGTCTGGGGCAAAGGG ACCACGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTG TATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGAC AGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCA GTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTG CACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCT CAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAG ACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACA CATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAG CGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATC AGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCC ACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA

			ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1367	ATX-P-3392	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGTAATGATAACTGGTGGAGTTGGGTCCGCCAGTCCCCCGGG AAGGGGCTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTC ACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAG TAGACAAGTCTAAGAACCAGTTTTCCCTGGAACTGAGCTCTGT GACCGCCGCGGACACGGCCGTGTATTTCTGTGCGCGAGAAGG ACTGGAACTACCCCACATGGACGTCTGGGGCAAAGGGACCAC GGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTT CCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCC GCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACA CGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGC TCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGT ATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGA TAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATG CCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCC GTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGA AGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAG GTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCC TCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATA AAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCA AAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTC TCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTG GTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAAT CGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGAC TGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGC TCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAAT CTCTTAGTCTTTCACCCGGT
1368	ATX-P-3395	HC IgG1 Fc nt	GAGGTGCAGCTGGTGGAGTCCGGGGGAGGCGTGGTCAAGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTAGCTACTGGATGCACTGGGTCCGCCAAGCTCCAGGGAA GGGGCTGGTGTGGGTCTCACGTATTAATAGTGATGGAAGTAGC ACAAGCTACGCGGACTCCGTGCAGGGCCGATTCACCATCTCCA GAGACATCGCCAAGAACACGCTGTATCTGCAAATGAACAGTC TGAGAGCCGAGGACACGGCTGTGTATTACTGTGCAAGAGGGC AGCACCTGGTTCAGGACTATTGGGGCCAGGGAACCCTGGTCAC CGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGG CCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGG GTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAG TTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCT GCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGG TCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTG CAATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACG CGTAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGCC ATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTG TTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGC CAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCC

			CGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACAC AATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACC TATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGC TTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCAC TTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCA ACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAG GAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAG GTTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGG TCAGCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGAT AGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATA AATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTAT GCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGT CTTTCACCCGGT
1369	ATX-P-3396	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAACCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCT TCACCGGCTACTATATGCACTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAACCCTAACAGTGGTGG CACAAACTATGCACAGAAGTTTCAGGGCAGGGTCACCATGAC CAGGGACACGTCCATCAGCACAGCCTACATGGAGCTGAGCAG GCTGAGATCTGACGACACGGCCGTGTATTACTGTGCGAGAGA ACGGGGCGACTATGATGGCGATGCTTTTGATATCTGGGGACAA GGGACAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTT CTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGG GACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAG CCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGT GTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATA GCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACT CACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTG TCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATG GTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGC AGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCT TCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGT AAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCC AAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTT CCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTA CGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAA TGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACG CCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACAC GCAGAAATCTCTTAGTCTTTCACCCGGT
1370	ATX-P-3397	HC IgG1 Fc nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTCCAGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TTAGTAACTATTACATGAACTGGGTCCGCCAGGCTCCAGGGAA GGGGCTGGAGTGGGTGGCCAACATAAAGCAAGATGGAAGTGA GAAATACTATGTGGACTCTGTGAAGGGCCGCTTCACCATCTCC AGAGACAACGCCAAGAACTCACTGTATCTCCAAATGAACAGC CTGAGAGCCGAGGACACGGCTGTGTATTACTGTGCGAGAGAT GGGTACTACAACTTCGATGCTTTTGATATCTGGGGACAAGGGA CAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGT ATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAG

			TTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGC ACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTC AGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGA CGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGT GGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGC GTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCA GCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCA CGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTA GAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1371	ATX-P-3405	HC IgG1 Fc nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTAGCTATAGCATGAACTGGGTCCGCCAGGCTCCAGGGA AGGGGCTGGAGTGGGTCTCATCCATTAGTAGTAGTAGTAGTTA CATATACTACGCAGACTCAGTGAAGGGCCGATTCACCATCTCC AGAGACAACGCCAAGAACTCACTGTATCTGCAAATGAACAGC CTGAGAGCCGAGGACACGGCCGTGTATTACTGTGCGAGAGAA GGGTATGATAACTGGAACTCTGCTTGTGATATCTGGGGACAAG GGACAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTC TGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGG ACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGC CAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTG TGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAG CCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACT CAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAA AAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTC ACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCC CAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATG ATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCA GTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTC ACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAA GCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAA GGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCC GCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACG TGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATG GGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCC ACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAA CTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCA GTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCA GAAATCTCTTAGTCTTTCACCCGGT
1372	ATX-P-3406	HC IgG1 Fc nt	CAGATCACCTTGAAGGAGTCTGGTCCTACGCTGGTGAAACCCA CACAGACCCTCACGCTGACCTGCACCTTCTCTGGGTTTTCACTC AGCACTAGTGGAGTGGGTGTGGGCTGGATCCGTCAGCCCCCA

			GGAAAGGCCCTGGAGTGGCTTGCACTCATTTATTGGAATGGTG ATGAGCGCTACAGCCCATCTCTGAAGAGCAGGCTCACCATCAC CAAGGACACCTCCAAAAACCAAGTGGTCCTTACAATGACCAA CATGGACCCTGTGGACACAGCCACATATTACTGTGCACACAGT CCGAACTGGGGATATGAAGCTTTTGATATCTGGGGACAAGGG ACAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTG TATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGAC AGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCA GTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTG CACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCT CAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAG ACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACA CATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAG CGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATC AGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCC ACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1373	ATX-P-3407	HC IgG1 Fc nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCCTGGTCCCGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTAGCTATTGCATGAACTGGGTCCGCCAGGCTCCAGGGAA GGGGCTGGAGTGGGTCTCATCCATTAATAGTGATAGTAGTTAC ATATACTACGCGGACTCAGTGAAGGGCCGATTCACCATCTCCA GAGACAACGCCAAGAACTCACTGTATCTGCAAATGAACAGCC TGAGAGCCGAGGACACGGCTGTGTATTACTGTGCGAGAGAGG GATACTACAACTGGAACGGAGGGAATGACTACTGGGGCCAGG GAACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTC TGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGG ACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGC CAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTG TGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAG CCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACT CAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAA AAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTC ACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCC CAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATG ATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCA GTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTC ACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAA GCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAA GGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCC GCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACG TGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATG

			GGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCC ACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAA CTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCA GTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCA GAAATCTCTTAGTCTTTCACCCGGT
1374	ATX-P-3408	HC IgG1 Fc nt	GAGGTGCAGCTGGTGGAGTCCGGGGGAGGCTTAGTTCAGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTAGCTATTGGATGCACTGGGTCCGCCAAGCTCCAGGGAA GGGGCTGGTGTGGGTCTCACATATTAATAGTGATGGGAGTAGC ACAAACTACGCGGACTCCGTGAAGGGCCGATTCACCATCTCCA GAGACAACGCCAAGAACACGCTGTATCTGCAGATGAACAGTC TGAGATCCGAGGACACGGCTGTATATTACTGTGCAAGAGAGG GTTACTGGAACGGTGATACTTTTGATATCTGGGGACAAGGGAC AATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTA TTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAG CCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGT TACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCA CACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCA GCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACA TGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCG TGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAG CCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACG CCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCA AGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAA TAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCC AAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTT CTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCT GGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAA TCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCC GTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGA CTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTG CTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAA TCTCTTAGTCTTTCACCCGGT
1375	ATX-P-3410	HC IgG1 Fc nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTACAGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTGCCTACGACATGCACTGGGTCCGCCAAACTCCAGGAAA AGGTCTGGAGTGGGTCTCAACTATTGGTACTGCTGGTGACACA TACTATCCAGACTCCGTGAAGGGCCGATTCACCATCTCCAGAG ATTTTGCCAGGAGGTCCTTGTATCTTCACATGAACAATCTGAG AGCCGGGGACACGGCTGTATATTACTGTGCAAGAGGGGGCAG CAGCAGCTGGTACGACTGGTACTTCGATCTCTGGGGCCGTGGC ACCCTGGTCACTGTCTCCTCAGCTAGCACTAAAGGGCCTTCTG TATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGAC AGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCA GTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTG CACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCT CAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAG ACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACA CATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAG CGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATC AGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCC

			ACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1376	ATX-P-3412	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTAGTACCTGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGATTGGGGAAATCTATCATAGTGGGAG CACCAACTATAACCCGTCCCTCAAGAGTCGAGTCACCATATCA CTAGACAAGTCCAAGAACCAGTTTTCCCTGAAGCTGAGCTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGATTAGTTT ATACAACTGGAACGATGCTGCTTTTGATATCTGGGGACAAGGG ACAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTG TATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGAC AGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCA GTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTG CACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCT CAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAG ACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACA CATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAG CGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATC AGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCC ACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1377	ATX-P-3413	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAGTCTGGGTCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGACTTCTGGATACACGT TCACCGGCTACTATATGCACTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAACCCTAACAGTGGTGG CACAACCTATGCACAGAAGTTTCAGGGCAGGGTCACCATGAC CAGGGACACGTCCATCAGCACAGCCTACATGGAGCTGAACAG GCTGAGATCTGACGACACGGCCGTGTATTACTGTGCGAGAGA GGCAGGTGGTTCAGGTGAATACTTCCAGCACTGGGGCCAGGG CACCCCGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCT GTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGA CAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCC

			AGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGT GCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGC CTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTC AGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCA CACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCC AGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGA TCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTC CCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAG TACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCA CCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAG CAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAG GCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGC CTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTG TCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGG AATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCAC CCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACT GACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAG TTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAG AAATCTCTTAGTCTTTCACCCGGT
1378	ATX-P-3414	HC IgG1 Fc nt	CAGATCACCTTGAAGGAGTCTGGTCCTACGCTGGTGAAACCCA CACAGACCCTCACGCTGACCTGCACCTTCTCTGGGTTCTCACTC AGCACTAGTGGAGTGGGTGTGGGCTGGATCCGTCAGCCCCCA GGAAAGGCCCTGGAGTGGCTTGCACTCATTTATTGGAATGATG TTAAGTTCTACAGTCCATCTCTGCAGAGCAGGCTCACCATCAC CAAGGACACCTCCAAAAACCAGGTGGTCCTTACACTGACCAA CATGGACCCTGTGGACACAGCCACATATTACTGTGCACACGGG GATAACTGGAACTACCGTGCTTTTGATATCTGGGGACAAGGGA CAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGT ATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAG TTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGC ACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTC AGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGA CGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGT GGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGC GTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCA GCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCA CGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTA GAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1379	ATX-P-3419	HC IgG1 Fc nt	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCT TTACCAGCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACA

			AGGGCTTGAGTGGATGGGATGGATCAGCGCTTATAATGGTAA CACACACTATGCACAGAACCTCCAGGGCAGAGTCACCATGAC CACAGACACATCCACGAGCACAGCCTACATGGAGCTGAGGAG CCTGAGATCTGACGACACGGCCGTGTATTACTGTGCGAGGAGT ATAGCAGCCCTTGACTTCTGGGGCCAGGGAACCCCGGTCACCG TCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCC CCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGT TGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTT GGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGC CGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTC ACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTGCA ATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACGCG TAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGCCATG CCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTGTTC CCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGCCAG AGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCCGA AGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAAT GCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATC GTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAA CGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCC GGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACC AAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTT TTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCA GCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGATAG CGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATAAA TCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTATGC ATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGTCT TTCACCCGGT
1380	ATX-P-3421	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGACTGGAGTGGATTGGACAAATCTATCATAGTGAAAA CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTG TGACCGCCGCGGACACGGCCATCTATTACTGTGCGAGAGTGGA TGACTGGAACTACGGGGGTCACTTTGACTACTGGGGCCAGGG AACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCT GTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGA CAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCC AGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGT GCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGC CTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTC AGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCA CACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCC AGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGA TCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTC CCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAG TACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCA CCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAG CAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAG GCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGC CTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTG TCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGG

			AATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCAC CCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACT GACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAG TTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAG AAATCTCTTAGTCTTTCACCCGGT
1381	ATX-P-3428	HC IgG1 Fc nt	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCT GGGGCCTCAGTTAAGGTCTCCTGCAAGGCTTCTGGTTACACCT TTACCGGCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAGCGCTTACAATGGTAA CACACACTATGCACAGAACCTCCAGGGCAGAGTCACCATGAC CACCGACACATCCACGAACACAGCCTACATGGAGCTGAGGAG CCTTATATCTGACGACACGGCCTTTTATTATTGTGCGAGAGCG GGACTGGGGATCGACTACTGGGGCCAGGGAACCCTGGTCACT GTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGC CCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGG TTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTT GGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGC CGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTC ACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTGCA ATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACGCG TAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGCCATG CCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTGTTC CCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGCCAG AGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCCGA AGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAAT GCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATC GTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAA CGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCC GGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACC AAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTT TTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCA GCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGATAG CGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATAAA TCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTATGC ATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGTCT TTCACCCGGT
1382	ATX-P-3430	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTAGTGACTGGTGGAGTTGGGTCCGCCAGTCCCCAGG GAAGGGGCTGGAGTGGATTGGGGAAATCTATCATAGTGGGAG CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCTCCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGGG GGCACATAGGCTACTACTACATGGACGTCTGGGGCAAAGGGA CCACGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGT ATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAG TTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGC ACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTC AGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGA CGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGT GGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGC GTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCA GCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCA

			CGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTA GAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1383	ATX-P-3431	HC IgG1 Fc nt	GAGGTGCAGCTGGTGCAGTCTGGAGCAGAGGTGAAAAAGCCC GGGGAGTCTCTGAAGATCTCCTGTAAGGGTTCTGGATACAGCT TTACCAACTACTGGATCGGCTGGGTGCGCCAGATGCCCGGGAA AGGCCTGGAGTGGATGGGGATCATCTATCCTGGTGACTCTGAT ACCATATACAGCCCGTCCTTCCAAGGCCAGGTCACCTTCTCAG CCGACAAGTCCATCAACACCGCCTACCTGCAGTGGAGCAGCCT GAAGGCCTCGGACACCGCCATGTATTACTGTGCGAGAGGACG TGGATATAGTGGCTACGAAGGTGCTTTTGATATCTGGGGACAA GGGACAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTT CTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGG GACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAG CCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGT GTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATA GCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACT CACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTG TCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATG GTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGC AGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCT TCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGT AAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCC AAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTT CCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTA CGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAA TGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACG CCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACAC GCAGAAATCTCTTAGTCTTTCACCCGGT
1384	ATX-P-3435	HC IgG1 Fc nt	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCT TTACCAACTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAGCGCTTACAATGGTAA CACACACTATGCACAGAAACTCCAGGGCAGAGTCACCATGAC CACAGACACATCCACGAGCACAGCCTACATGGAGCTGAGGAG CCTGAGATCAGACGACACGGCCGTGTATTACTGTGCGAGAGC GGCAGCAGCCGTTGACTACTGGGGCCAGGGAACCCTGGTCAC CGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGG CCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGG GTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAG

			TTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCT GCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGG TCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTG CAATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACG CGTAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGCC ATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTG TTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGC CAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCC CGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACAC AATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACC TATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGC TTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCAC TTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCA ACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAG GAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAG GTTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGG TCAGCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGAT AGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATA AATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTAT GCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGT CTTTCACCCGGT
1385	ATX-P-3436	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGTCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCAGTTGCACTGTCTCTGGTGGCTCCGT CAGCAGTGGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCA GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGG AGCACCAAGTACAACCCCTCCCTCAAGAGTCGAGTCACCATAT CAGTAGACACGTCCAAGAACCAGGTCTCCCTGAAGCTGAGTTC TGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGAT AAGGGGCACTGGAACTACGGTGCTTTTGATATCTGGGGACAA GGGACAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTT CTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGG GACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAG CCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGT GTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATA GCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACT CACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTG TCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATG GTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGC AGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCT TCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGT AAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCC AAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTT CCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTA CGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAA TGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACG CCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACAC GCAGAAATCTCTTAGTCTTTCACCCGGT
1386	ATX-P-3437	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG

			GAAGGGGCTGGAGTGGATTGGGGAAATCTATCATAGTGGAAA TATTAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTGGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGGG GGGAATACGGTGACCCCGTGGGGTACTTCGATCTCTGGGGCCG TGGCACCCTGGTCACTGTCTCCTCAGCTAGCACTAAAGGGCCT TCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAG GGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGA GCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGG TGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATA GCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACT CACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTG TCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATG GTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGC AGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCT TCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGT AAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCC AAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTT CCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTA CGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAA TGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACG CCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACAC GCAGAAATCTCTTAGTCTTTCACCCGGT
1387	ATX-P-3440	HC IgG1 Fc nt	CAGGTTCAGCTGGTGCAGTCTGGAGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGTTACACCT TTACCACCTATGGTATCAGCTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAGCGCTTACAGTGGTAA CACAAACTATGCACAGAAGCTCCAGGGCAGAGTCACCATGAC CACAGACACATCCACGAGCACAGCCTACATGGAGCTGAGGAG CCTGAGATCTGACGACACGGCCGTGTATTACTGTGCGAGAGAG AGAGTCTCCAACTGGGTCTTTGACTTCTGGGGCCAGGGAACCC TGGTCACTGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTT CCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCC GCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACA CGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGC TCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGT ATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGA TAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATG CCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCC GTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGA AGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAG GTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCC TCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATA AAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCA AAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTC TCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTG GTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAAT

			CGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGAC TGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGC TCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAAT CTCTTAGTCTTTCACCCGGT
1388	ATX-P-3442	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGTTCCAT CAGCAGTAGTGACTGGTGGAGCTGGGTCCGCCAGCCCCCAGG GAAGGGGCTGGAGTGGATTGGGGAAATCTATCATAGTAGGAA CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAGTTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGTGGAG GTGTGGTGGCCGACTACTACATGGACGTCTGGGGCAAAGGGA CCACGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGT ATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAG TTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGC ACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTC AGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGA CGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGT GGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCCGGCACCTGAACTGCTTGGTGGTCCCAGC GTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCA GCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCA CGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTA GAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1389	ATX-P-3444	HC IgG1 Fc nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCCTGGTCAAGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTAGCTATGGCATGAACTGGGTCCGCCAGGCTCCAGGGA AGGGGCTGGAGTGGGTCTCATCCATTAGTGGTTATGGTAGTTA CATATACTACGCAGCCTCAGTGAAGGGCCGATTCACCATCTCC AGAGACAGCGCCAAGAACTCACTGTATCTGCAAATGAACAGC CTGAGCGCCGAGGACACAGCTGTGTATTACTGTGCGAGAGAA TTAGGTGGGATCTACTACGGGGTAGGGTACTTCGATCTCTGGG GCCGTGGCACCCTGGTCACTGTCTCCTCAGCTAGCACTAAAGG GCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGG GAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCC TGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAG TGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGT ATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGG CACTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAAT ACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAA ACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTG GTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCT AATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGAC

			GTGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTG ATGGTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGG AGCAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGT CCTTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAA GGTAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCAT TTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATAC TCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCC CTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGT TGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAAC AACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTAT AGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAAT GTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACT ACACGCAGAAATCTCTTAGTCTTTCACCCGGT
1390	ATX-P-3447	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCGT CAGCAGTGGTAATTACTATTGGAGCTGGATCCGGCAGCCCCCA GGGAAGGGACTGGAGTGGATTGGGTATATCTATTCCAGTGGG AGCACCAACTACAACCCCTCCCTCAAGAGTCGAGTCACCATAT CAATAGACACGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTC TGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAAGT CCTCGTGGATACAGCTATGGTCCCTTTGCCTACTGGGGCCAGG GGACCCTGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTC TGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGG ACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGC CAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTG TGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAG CCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACT CAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAA AAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTC ACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCC CAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATG ATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGT CCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGG TGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCA GTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTC ACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAA GCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAA GGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCC GCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACG TGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATG GGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCC ACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAA CTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCA GTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCA GAAATCTCTTAGTCTTTCACCCGGT
1391	ATX-P-3448	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCACAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCAT CAGCAGTGGTGGTTACAACTGGAACTGGATCCGCCAGCACCC AGGGAAGGGCCTGGAATGGATTGGGTACATCAATTACAGTGG GAATACCTATTACAACCCGTCCCTCAAGAGTCGAGTTACCATA TCAGTAGACACGTCTAAGAACCAGTTCTCCCTGAAGCTGAGTT CTGTGACTGCCGCGGACACGGCCGTTTATTACTGTGCGAGAGG GCCCCTGGATACAGCTATGGCCCCCTTTGACTACTGGGGCCAG GGAACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTT CTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGG GACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAG

			CCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGT GTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATA GCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACT CACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTG TCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATG GTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGC AGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCT TCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGT AAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCC AAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTT CCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTA CGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAA TGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACG CCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACAC GCAGAAATCTCTTAGTCTTTCACCCGGT
1392	ATX-P-3449	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGTACTGTCTCTGGTGACTCCAT CAGTAGTTACTACTGGAGTTGGATCCGGCAGCCCCCAGGGAA GGGACTGGAGTGGATTGGATATATCTATTATAGTGGGTTCACC AAGTACAACCCCTCCCTCAAGAGTCGAGTCACCATTTCAGTAG ACACGTCCAAGAACCAGTTCTCCCTGAGGCTGAGCTCTGTGAC CGCTGCGGACACGGCCGTGTATTACTGTGCGAGCGTCGATTCA AAGTGGAACTACGGGTCTTTTCATATCTGGGGACAAGGGACA ATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTAT TTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGC CGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTT ACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCAC ACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCA GCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACA TGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCG TGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAG CCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACG CCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCA AGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAA TAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCC AAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTT CTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCT GGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAA TCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCC GTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGA CTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTG CTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAA TCTCTTAGTCTTTCACCCGGT
1393	ATX-P-3450	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGGCTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCTCTGTCTCTGGTGACTCCGT CAGCAATAATCGTTATTATTGGAGCTGGATTCGGCAGCCCCCA

			GGGAAGGGACTGGAGTGGATTGGGTATATCTATTACAGTGGG AGCACCAACTACAACCCCTCCCTCAAGAGTCGAGTCACCATAT CAGTAGACACGTCCAAGAACCAGTTGTCCCTGAACCTGAGTTC TGTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGAGAT CGCCCATCCCGGTATAAGTGGAATTACGATGCTTTTGCTATCT GGGGACAAGGGACAATGGTCACCGTCTCTTCAGCTAGCACTA AAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGAC CTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTAT TTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGA CAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGG CTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGC TGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTTC AAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGA TAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTT GGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATA CTCTAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGT TGACGTGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTAT GTTGATGGTGTAGAGGTACACAATGCTAAGACTAAACCTCGCG AGGAGCAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGAC CGTCCTTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGC AAGGTAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACC ATTTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTAT ACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTAT CCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCT GTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAA ACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGT ATAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCA ATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCA CTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
1394	ATX-P-3451	HC IgG1 Fc nt	CAGGTGCAGCTACAGCAGTGGGGCGCAGGACTGTTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCGCTGTCTATGGTGGGTCCTT CAGTGATTACTACTGGACCTGGATCCGCCAGCCCCCAGGGAAG GGGCTGGAGTGGATTGGTGAAGTCAATCATATTGGAAGCACC AACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAGTAG ACACGTCCAAGAACCAGTTCTCCCTGAACCTGAGCTCTGTGAC CGCCGCGGACACGGCTGTGTATTACTGTGCGAAGTATAGCACT TCCTGGTACGGCTGGTTCGACCCCTGGGGCCAGGGAACCCTGG TCACTGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCC TTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCC CTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCG TAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGT TTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCT GTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATA TTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGATAA ACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATGCCC GCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTC CTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTA CGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGA TCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTA CACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCG ACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATT GGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAG CACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAG GTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCG TGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTT AAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCGA

			ACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCGTCC TGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGT AGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCC GTTATGCATGAAGCGTTACATAATCACTACACGCAGAAATCTC TTAGTCTTTCACCCGGT
1395	ATX-P-3453	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGGCTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCAT CAGCAGTAATAACTGGTGGAGTTGGTTCCGCCAGCCCCCAGGG AAGGGACTGGAGTGGATTGGGAGAATCTATCATAGTGGGACC ACCAACTACAACCCGTCCCTCGAGAGTCGAGTCACCATATCAG TAGACAACTCCAGGAACCAGTTCTCCCTGAAACTGAGCTCTGT GACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGCGA GGAGTGGGAGCTGCGGGGAGGTGTTTTTGATATCTGGGGACA AGGGACAATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCT TCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAG GGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGA GCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGG TGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATA GCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACT CACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTG TCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATG GTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGC AGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCT TCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGT AAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCC AAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTT CCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTA CGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAA TGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACG CCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACAC GCAGAAATCTCTTAGTCTTTCACCCGGT
1396	ATX-P-3454	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAATCTGGGCCTGAGTTGAAGAAGCCT GGGGCCTCAGTAAAGGTTTCCTGCAAGGCTTCTGGATACACCT TCACTAACTATGCTGTGAATTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAACACCAACACTGGGCA CCCAACGTATGCCCAGGGCTTCACAGGACGGTTTGTCTTCTCC TTGGACACCTCTGTCAGTACGGCATATCTGCAGATCAGCAGCC TAAAGGCTGAGGACACTGCCGTTTATTACTGTGCGAGAGACAG CAGCAGCTGGGGCTACTGGGGCCAGGGAACCCTGGTCACTGT CTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCC CGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTT GCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTG GAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCC GTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCA CTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTGCAA TGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACGCGT AGAACCGAAATCGTGTGATAAAACTCACACATGCCCGCCATG CCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTGTTC CCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGCCAG AGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCCGA

			AGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAAT GCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATC GTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAA CGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCC GGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACC AAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAA ATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTT TTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCA GCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGATAG CGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATAAA TCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTATGC ATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGTCT TTCACCCGGT
1397	ATX-P-3455	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGACGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCAT CAGTAGTGATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGACTGGAGTGGATTGGGGAAATCTATCACAGTGAAAA CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAGGCTGAACTCTG TGACCGCCGCGGACACGGCCATGTATTACTGTGCGAGAGGGA GGGAGCTAACTGGCCTCTTTGACTACTGGGGCCAGGGAACCCT GGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTT CCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCC GCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACA CGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGC TCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGT ATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGA TAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATG CCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCC GTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGA AGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAG GTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCC TCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATA AAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCA AAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTC TCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTG GTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAAT CGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGAC TGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGC TCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAAT CTCTTAGTCTTTCACCCGGT
1398	ATX-P-3456	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGCAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG AAAGGGACTGGAATGGATTGGGGACATCTATCATAGTGGAAA CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCCTATCA GTAGACATGTCCAAGAACCAGTTCTCCCTGAAACTGAACTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGAG GTATAGCAGTGACTGCCTACTTTGACTACTGGGGCCAGGGAAC CCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTA TTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAG CCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGT

			TACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCA CACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCA GCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACA TGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCG TGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAG CCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACG CCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCA AGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAA TAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCC AAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTT CTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCT GGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAA TCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCC GTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGA CTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTG CTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAA TCTCTTAGTCTTTCACCCGGT
1399	ATX-P-3458	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCT TCACCGGCTACTATTTGCACTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAACCCTCACAGTGGTGG CACAATCTATGCACAGAAGTTTCAGGACAGGGTCACCATGACC AGGGACACGTCCATCAGCACAGCCTACATGGAGCTGAGCAGG CTGAGATCTGACGACACGGCCGTGTATTACTGTGCGAACTGGA ACTCCGGGGACTCCTACTACTACTACATGGACGTCTGGGGCAA AGGGACCACGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCT TCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAG GGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGA GCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGG TGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATA GCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCAC TCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACA AAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACT CACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTC CCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAAT GATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTG TCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATG GTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGC AGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCT TCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGT AAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCC AAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTT CCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTA CGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAA TGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAACAACG CCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCA AACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTAT TCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACTACAC GCAGAAATCTCTTAGTCTTTCACCCGGT
1400	ATX-P-3459	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGTTCCAT CAGCAGTGATAACTGGTGGAATTGGGTCCGCCAGCCCCCAGG

			GAAGGGGCTGGAGTGGATTGGAAAAATCTATCATAGTGGGAA CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACGAGTCCAAGAACCAGTTCTCCCTGAGGCTGTACTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGGG TCGATTTTTGGAGTGGTTCCCACATGGACGTCTGGGGCAAAGG GACCACGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCT GTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGA CAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCC AGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGT GCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGC CTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTC AGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCA CACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCC AGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGA TCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTC CCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAG TACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCA CCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAG CAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAG GCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGC CTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTG TCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGG AATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCAC CCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACT GACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAG TTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAG AAATCTCTTAGTCTTTCACCCGGT
1401	ATX-P-3462	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT TAGCAGTAATAATTGGTGGAGTTGGGTCCGCCAGGCCCCAGG GAAGGGGCTGGAGTGGATTGGGAAGATCTATCAAAGTGGGAG CACCATGTACAACCCGTCCCTCAAGAGTCGAGTCACCATGTCG GTAGACAAGTCCAAGAACCAGTTCTCCCTGATTCTGAGTTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGATA AACCCCCTTTACTGGGAGCCTTTGACTACTGGGGCCAGGGAAC CCTGGTCACTGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTA TTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAG CCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGT TACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCA CACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCA GCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACA TGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCG TGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAG CCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACG CCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCA AGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAA TAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCC AAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTT CTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCT GGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAA

			TCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCC GTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGA CTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTG CTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAA TCTCTTAGTCTTTCACCCGGT
1402	ATX-P-3463	HC IgG1 Fc nt	CAGGTGCAGCTGGTGGAGTCTGGGGGAGGCGTGGTCCAGCCT GGGAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTAGCTATGCCATGCACTGGGTCCGCCAGGCTCCAGGCAA GGGGCTGGAGTGGGTGGCAGTTATATCATATGATGGAAGTAA TAAATACTATGCGGACTCCGTGAAGGGCCGATTCACCATCTCC AGAGACAATTCCAAGAACACGCTGTCTCTGCAAATGAACAGC CTGAGAGCTGAGGACACGGCTGTGTATTACTGTGCGAAAAGG GGGGGATACAGCTATGGTCCTTTTGAACACTGGGGCCAGGGA ACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTG TATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGAC AGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCA GTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTG CACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCT CAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAG ACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACA CATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAG CGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATC AGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCC ACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1403	ATX-P-3466	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAATCTGGGTCTGAATTGAAGAAGCCTG GGGCCTCAGTGAAGGTTTCCTGCAAGGCTTCTGGATACACCTT CACTAGCTATACTATGAATTGGGTGCGACAGGCCCCTGGACAA GGGCTTGAGTGGGTGGGATGGATCAACACCGCCACTGGGACC CCAACGTATGCCCAGGGCTTCACAGGACGGTATGTCTTCTCCT TGGACACCTCTGTCAGCACGGCTTATCTGCAGATCAGCGGCCT AAAGGCTGAGGACACTGCCGTGTATTTCTGTGCGAGGTATAGT GGGAGCCACTCCTTTGACTACTGGGGCCAGGGAACCCTGGTCA CCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTG GCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTG GGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAA GTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCC TGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTG GTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTT GCAATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAAC GCGTAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGC CATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCT GTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACG CCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATC

			CCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACA CAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGAC CTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGG CTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTC AACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGA GGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAA GGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACG GTCAGCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGG ATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGA TAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTT ATGCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTA GTCTTTCACCCGGT
1404	ATX-P-3467	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGTAGTGATTACTGGTGGAGTTGGGTCCGCCAGTCCCCAGGG AAGGGGCTGGAGTGGATTGGGAAAATCTATCATAGTGGGAAC ACCAACCACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAA TAGACAAGTCCAGGAACCAGTTCTCCCTGAATCTGAACTCTGT GACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGAAGG ACTGGAACTTCCCCACATGGACGTCTGGGGCAAAGGGACCAC GGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTT CCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCC GCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACA CGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGC TCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGT ATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGA TAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATG CCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCC GTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGA AGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAG GTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCC TCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATA AAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCA AAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTC TCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTG GTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAAT CGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGAC TGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGC TCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAAT CTCTTAGTCTTTCACCCGGT
1405	ATX-P-3468	HC IgG1 Fc nt	CAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTCCAGCCT GGGAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTAGTTATGCTATGCACTGGGTCCGCCAGGCTCCAGGCAA GGGGCTGGAGTGGGTGACAGTTATATCATATGATGGAAGTAA TAAATACTATGCAGACTCCGTGAAGGGCCGATTCACCATCTCC AGAGACAATTCCAAGAACACGCTGTATCTGCAAATGAACAGC CTGAGAGCTGAGGACACGGCTGTGTATTACTGTGCGAAAAGG GGTAACTGGAACTACGGACCTTTTCACTACTGGGGCCAGGGAA CCCTGGTCACTGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGT ATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACA GCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAG

			TTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGC ACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTC AGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGA CGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGT GGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACAC ATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGC GTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCA GCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCA CGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTA GAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTAC GCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1406	ATX-P-3469	HC IgG1 Fc nt	CAGGTGCAGCTGGTGGAGTCTGGGGGAGGCGTGGTCCAGCCT GGGAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TCAGTGCCTATGCCATCCACTGGGTCCGCCAGGCTCCAGGCAA GGGGCTGGAGTGGGTGGCAGTTATATCATATGATGGAAGTAA TAAAAAGTATGCAGACTCCGTGAAGGGCCGATTCACCATCTCC AGAGACAATTCCAAGAACACGCTGGATCTGGAAATGAACAGC CTGAGAGCTGAGGACACGGCTGTGTACTACTGTGCGAAAGGG CTACCTTTTGACTACTGGGGCCAGGGAACCCTGGTCACCGTCT CCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCC GTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTG CCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGG AACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCG TCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACT GTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTGCAATG TGAACCACAAACCTTCAAATACAAAAGTGGATAAACGCGTAG AACCGAAATCGTGTGATAAAACTCACACATGCCCGCCATGCCC GGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTGTTCCCG CCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGCCAGAG GTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCCGAAG TTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAATGC TAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATCGT GTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACG GCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGG CCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAA GAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAAT GACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTT TATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGC CGGAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCG ACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATC ACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTATGCAT GAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGTCTTT CACCCGGT
1407	ATX-P-3470	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAATCTGGGTCTGACTTGAAGAAGCCTG GGGCCTCAGTGAAGGTTTCCTGCAAGGCTTCTGGATACACCTT CACTAGTTATACTATGAATTGGGTGCGACAGGCCCCTGGACAA

			GGGCTTGAGTGGATGGGATGGATCAACACCAACACTGGGACC CCAACGTATGCCCAGGGCTTCACAGGACGGTTTGTCTTCTCCT TGGACACCTCTGTCAGCACGGCATATCTGCAGATCAGCAGCCT AAAGGCTGAGGACACTGCCGTGTATTACTGTACGAGGTATACT GGGAACTACTCCTTTGACTACTGGGGCCAGGGAACCCTGGTCA CCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTG GCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTG GGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAA GTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCC TGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTG GTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTT GCAATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAAC GCGTAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGC CATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCT GTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACG CCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATC CCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACA CAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGAC CTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGG CTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCA CTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTC AACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGA GGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAA GGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACG GTCAGCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGG ATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGA TAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTT ATGCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTA GTCTTTCACCCGGT
1408	ATX-P-3471	HC IgG1 Fc nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGTCTTGGTACAGCCT GGGGGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGATTCACCT TTAGGAGCTATGCCATGAGCTGGGTCCGCCAGGCTCCAGGGA AGGGGCTGGAGTGGGTCTCAGCTATTAGTGGTAGTGGTGATAG CACATACTTCGCAGACTCCGTGAAGGGCCGGTTCACCATCTCC AGAGACAATTCCAAGAACACGCTGTCTCTGCAAATGAACAGC CTGAGAGCCGAGGACACGGCCGTATATTACTGTGCGAGCATCC TAGGATATTGTAGTGGTACCAGCTGCTATGGCCTCTTTGACAA CTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAGCTAGCACT AAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGA CCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTA TTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTG ACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGG GCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCG CTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAACCTT CAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTG ATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCT TGGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGAT ACTCTAATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGG TTGACGTGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTA TGTTGATGGTGTAGAGGTACACAATGCTAAGACTAAACCTCGC GAGGAGCAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGA CCGTCCTTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTG CAAGGTAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAAC CATTTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTA TACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTA TCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGC

			TGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAA AACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTG TATAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGC AATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATC ACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
1409	ATX-P-3472	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGGCTCCAT CAGTAATGATAACTGGTGGAGTTGGGTCCGCCAGTCCCCCGGG AAGGGGCTGGAGTGGATTGGGAAAATCTATCATAGTGAGTTC ACCAACTACAACCCGTCCCTCAGGAGTCGAGTCACCATATCAG TAGACAAGTCCAAGAACCAGTTCTCCCTGGAGCTGACCTCTGT GACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGAGTA TCAGAACTACATGGACGTCTGGGGCAAAGGGACCACGGTCAC CGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGG CCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGG GTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAG TTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCT GCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGG TCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTG CAATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACG CGTAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGCC ATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTG TTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGC CAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCC CGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACAC AATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACC TATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGC TTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCAC TTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCA ACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAG GAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAG GTTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGG TCAGCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGAT AGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATA AATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTAT GCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGT CTTTCACCCGGT
1410	ATX-P-3361	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGTTGTCTCTGGTGACTCCAT CAGCAGTAATAACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGTCTGGAGTGGATTGGACAAATCTATCATAGTGGAAT CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGGAGCTGACCTCTG TGACCGCCGCGGACGCGGCCGTGTATTACTGTGCGAGGGCCCA GTGGGAACTACGAGCGGGCTGGTTCGACCCCTGGGGCCAGGG AACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCT GTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGA CAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCC AGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGT GCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGC CTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTC AGACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAA AGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCA CACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCC AGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGA TCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTC

			CCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGT GTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAG TACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCA CCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAG CAATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAG GCCAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGC CTTCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTG TCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGG AATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCAC CCGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACT GACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAG TTGCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAG AAATCTCTTAGTCTTTCACCCGGT
1411	ATX-P-3366	HC IgG1 Fc nt	GAGGTGCAGCTGGTGGAGTCTGGGGGAGGCTTGGTAAAGCCT GGGGGGACCCTTACACTCTCCTGTGCAGCCTCTGGATTCACTT TCAGTAACGCCTGGATGAGCTGGGTCCGCCAGGCTCCAGGGA AGGGGCTGGAGTGGGTTGGCCGTATTAAAAGCAAAACTGATG GCGGGACAACAGACTACGCTGCACCCGTGAAAGGCAGATTCA CCATCTCAAGAGATGATTCAAAAAACACGCTGTATCTGCAAAT GAACAGCCTGAAAACCGAGGACACAGCCGTGTATTACTGTAC CCCCCGGTACAACTCGGACTTTGACTACTGGGGCCAAGGAACC CTGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTATT TCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCC GCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACA CGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGC TCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGT ATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGA TAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATG CCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCC GTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGA AGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAG GTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCC TCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATA AAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCA AAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTC TCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTG GTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAAT CGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGAC TGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGC TCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAAT CTCTTAGTCTTTCACCCGGT
1412	ATX-P-3376	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCAT CAGTAGTTACTACTGGAGCTGGATCCGGCAGCCCCCAGGGAA GGGACTGGAGTGGATTGGGTATATCTATTACAGTGGGTTCACC AAGTACAACCCCTCCCTCAAGAGTCGAGTCACCATATCAGTAG ACACGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGAC CGCTGCGGACACGGCCGTGTATTACTGTGCGACCCACCCTCGT GGATACAACTATGGTCCCTTTGACTACTGGGGCCAGGGAACCC TGGTCACTGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTT CCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCC GCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA

			CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACA CGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGC TCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGT ATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGA TAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATG CCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCC GTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGA AGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAG GTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCC TCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATA AAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCA AAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTC TCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTG GTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAAT CGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGAC TGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGC TCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAAT CTCTTAGTCTTTCACCCGGT
1413	ATX-P-3377	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCGT CAACAGTGGTCGTTACTACTGGAGCTGGATCCGGCAGCCCCCA GGGAAGGGACTGGAGTGGATTGGGTATATCTATTCCAGTGGGT ACACCAACTACAACCCCTCCCTCAAGAGTCGAGTCACCATGTT ACTAGACACGTCCAAGAACCAGTTCTCCCTGAAGCTGAACTCC GTGACCGCTGCGGACACGGCCGTGTATTACTGTGCGAGGTCAC GTGGATACCGCTATGGTCCCTTTGACTACTGGGGCCAGGGAAC CCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTA TTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAG CCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGT TACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCA CACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCA GCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACA TGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCG TGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAG CCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACG CCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCA AGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAA TAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCC AAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTT CTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCT GGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAA TCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCC GTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGA CTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTG CTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAA TCTCTTAGTCTTTCACCCGGT
1414	ATX-P-3418	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAATCTGGGTCTGAGTTGAAGAAGCCTG GGGCCTCAGTGAAGGTTTCCTGCGAGGCTTCTGGATACACCTT CACTAGCTATGCTATGAATTGGGTGCGACAGGCCCCTGGACAA

			GGGCTTGAGTGGATGGGATGGATCAACACCAACACTGGGACC CCAACTTATGCCCAGGGCTTCACAGGACGGTTTGTCTTCTCCTT GGACACCTCTGTCAGCACGGCATATCTGCAGATCAGCAGCCTA AAGGCTGAGGACACTGCCGTGTATTACTGTGCGAGTCATAGCA CCTCGTTTGACTACTGGGGCCAGGGGACCCTGGTCACCGTCTC CTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGT CCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCC TTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAA CAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCTGCCGTC CTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTG TCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTGCAATGT GAACCACAAACCTTCAAATACAAAAGTGGATAAACGCGTAGA ACCGAAATCGTGTGATAAAACTCACACATGCCCGCCATGCCCG GCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTGTTCCCGC CGAAGCCTAAAGATACTCTAATGATCAGCCGTACGCCAGAGG TGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCCCGAAGT TAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACACAATGCT AAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACCTATCGT GTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGCTTAACG GCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCACTTCCGG CCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCAACCAA GAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAGGAAAT GACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAGGTTTT TATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGGTCAGC CGGAGAATAATTATAAAACAACGCCACCCGTCCTGGATAGCG ACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATAAATC ACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTATGCAT GAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGTCTTT CACCCGGT
1415	ATX-P-3420	HC IgG1 Fc nt	CAGGTGCAGCTACAGCAGTGGGGCGCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCGCTGTCCATGGTGGGTCCT TCAGTGATTACTACTTGACCTGGATTCGCCAGCCCCCAGGGAA GGGGCTGGAGTGGATTGGGGAAATCAATCATAGTGGAAGCAC CAACTACAACCCCTCCCTCAAGAGTCGAGTCACCTTATCAATA GACACGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTGTGA CCGCCGCGGACACGGCTGTGTATTACTGTGCGAGAGGTAGTGA AGACTACTACTATTACATGGACGTCTGGGGCAAAGGGACCAC GGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTT CCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCC GCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTA CCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACA CGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGC TCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGT ATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTGGA TAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACATG CCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTG TTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCC GTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGA AGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAG GTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCC TCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAG ATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATA AAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCA AAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTC TCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCTG GTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAAT

			CGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCCG TCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGAC TGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTGC TCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAAT CTCTTAGTCTTTCACCCGGT
1416	ATX-P-3426	HC IgG1 Fc nt	GAGGTGCAGCTGGTGCAGTCTGGAGCAGAGGTGAAAAAGCCC GGGGAGTCTCTGAAGATCTCCTGTAAGGGTTCTGGATACATCT TTACCAGCTACTGGATCGGCTGGGTGCGCCAGATGCCCGGGAA AGGCCTGGAGTGGATGGGGATCATCTATCCTGGTGACTCTGAT ACCAGATACAGCCCGTCTTTCCAAGGCCAGGTCACCATCTCAG CCGACAAGTCCATCATCACCGCCTACCTGCAGTGGAGCAGCCT GAAGGCCTCGGACACCGCCATGTATTACTGTGCGAGACACGA CTACTTTGATATTGGAGGTTATTTTGACTACTGGGGCCAGGGA ACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTG TATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGAC AGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCA GTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTG CACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCT CAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAG ACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACA CATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAG CGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATC AGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCC ACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1417	ATX-P-3432	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTGATGGATACACCT TCACCGACTACTATATGCACTGGGTGCGACAGGCCCCTGGACA AGGGCATGAGTGGATGGGATGGATCAACCCTAACAGTGGTGT CACATACTATGCACAGAAGTTTCAGGGCAGGGTCACCATGACC AGGGACACGTCCATCAGCACAGCCTACATGGAGCTGAACAGA CTTAGATCTGACGACACGGCCGTGTATTACTGTGCGAGAGATC GGACCTTCTACTTTGACTACTGGGGCCAGGGAACCCTGGTCAC TGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTATTTCCCTTGG CCCCGTCCAGCAAATCGACCTCGGGAGGGACAGCCGCCCTGG GTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTTACCGTAAG TTGGAACAGTGGGGCGCTGACAAGTGGTGTGCACACGTTTCCT GCCGTCCTGCAATCATCGGGCTTGTATAGCCTCAGCTCTGTGG TCACTGTCCCAAGTTCATCGCTGGGCACTCAGACGTATATTTG CAATGTGAACCACAAACCTTCAAATACAAAAGTGGATAAACG CGTAGAACCGAAATCGTGTGATAAAACTCACACATGCCCGCC ATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCGTGTTCCTG TTCCCGCCGAAGCCTAAAGATACTCTAATGATCAGCCGTACGC CAGAGGTGACATGTGTCGTGGTTGACGTGTCCCACGAAGATCC

			CGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAGAGGTACAC AATGCTAAGACTAAACCTCGCGAGGAGCAGTACGCCTCGACC TATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCAAGATTGGC TTAACGGCAAAGAATATAAGTGCAAGGTAAGCAATAAAGCAC TTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCCAAAGGTCA ACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTTCTCGTGAG GAAATGACTAAAAATCAAGTATCCCTTACGTGTCTGGTTAAAG GTTTTTATCCTAGCGATATTGCTGTTGAATGGGAATCGAACGG TCAGCCGGAGAATAATTATAAAACAACGCCACCCGTCCTGGAT AGCGACGGCTCATTTTTTCTGTATAGCAAACTGACTGTAGATA AATCACGGTGGCAGCAGGGCAATGTATTCAGTTGCTCCGTTAT GCATGAAGCGTTACATAATCACTACACGCAGAAATCTCTTAGT CTTTCACCCGGT
1418	ATX-P-3433	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCT TCACCGACTACTATATGCACTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAACCCTAACAATGGTGG CACAGACTATGCACAGAAGTTTCAGGGCAGGGTCACCATGAC CAGGGACACGTCCATCAGCACAGCCTACATGGAGTTACACAG GCTAAGATCTGACGACACGGCCGTGTATTTCTGTGCGAGAGGG GTCTATGATGTAGTAGTTCCAACTGCTATCGTCAACTGGTTCG ACCCCTGGGGCCAGGGAACCCTGGTCACCGTCTCCTCAGCTAG CACTAAAGGGCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAA TCGACCTCGGGAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAG ATTATTTCCCTGAGCCAGTTACCGTAAGTTGGAACAGTGGGGC GCTGACAAGTGGTGTGCACACGTTTCCTGCCGTCCTGCAATCA TCGGGCTTGTATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTC ATCGCTGGGCACTCAGACGTATATTTGCAATGTGAACCACAAA CCTTCAAATACAAAAGTGGATAAACGCGTAGAACCGAAATCG TGTGATAAAACTCACACATGCCCGCCATGCCCGGCACCTGAAC TGCTTGGTGGTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAA AGATACTCTAATGATCAGCCGTACGCCAGAGGTGACATGTGTC GTGGTTGACGTGTCCCACGAAGATCCCGAAGTTAAGTTCAATT GGTATGTTGATGGTGTAGAGGTACACAATGCTAAGACTAAACC TCGCGAGGAGCAGTACGCCTCGACCTATCGTGTCGTGAGCGTT CTGACCGTCCTTCACCAAGATTGGCTTAACGGCAAAGAATATA AGTGCAAGGTAAGCAATAAAGCACTTCCGGCCCCAATCGAGA AAACCATTTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAGG TGTATACTCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCA AGTATCCCTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATA TTGCTGTTGAATGGGAATCGAACGGTCAGCCGGAGAATAATTA TAAAACAACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTT CTGTATAGCAAACTGACTGTAGATAAATCACGGTGGCAGCAG GGCAATGTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATA ATCACTACACGCAGAAATCTCTTAGTCTTTCACCCGGT
1419	ATX-P-3438	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGACTCCAT CAGCAATGATTACTGGTGGAATTGGGTCCGCCAGCCCCCAGGG AAGGGTCTGGAGTGGATTGGAGAAATCTATCATAGTGGGCAC ACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCATATCAG TAGACAAGTCCAAGAACCAGTTGTCCCTGAAGCTGACCTCTGT GAACGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGTGG AACTGAAATTACGGGGTACATGGACGTCTGGGGCAAAGGGAC CACGGTCACCGTCTCCTCAGCTAGCACTAAAGGGCCTTCTGTA TTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAG CCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGT

			TACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCA CACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCA GCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACA TGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCG TGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAG CCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACG CCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCA AGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAA TAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCC AAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTT CTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCT GGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAA TCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCC GTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGA CTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTG CTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAA TCTCTTAGTCTTTCACCCGGT
1420	ATX-P-3441	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGGGACCCTGTCCCTCACCTGCGCTGTCTCTGGTGCCTCCAT CAGAAGTGGTCACTGGTGGAGTTGGGTCCGCCAGCCCCCAGG GAAGGGACTGGAGTGGATTGGGGAAATCTATCATAGTGGGAA CACCAACTACAACCCGTCCCTCAAGAGTCGAGTCACCCTATCA GTAGACAAGTCCAAGAACCAGTTCTCCCTGAAGCTGAGCTCTG TGACCGCCGCGGACACGGCCGTGTATTACTGTGCGAGAGGTCA CTACGGTGACTACGTCGTCTACTTTGACTACTGGGGCCAGGGA ACCCTGGTCACTGTCTCCTCAGCTAGCACTAAAGGGCCTTCTG TATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGAC AGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCA GTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTG CACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCT CAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAG ACGTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAG TGGATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACA CATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAG CGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATC AGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCC ACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGT AGAGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTA CGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACC AAGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCA ATAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGC CAAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCT TCTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTC TGGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGA ATCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACC CGTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTG ACTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTT GCTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAA ATCTCTTAGTCTTTCACCCGGT
1421	ATX-P-3446	HC IgG1 Fc nt	CAGGTGCAGCTGCAGGAGTCGGGCCCAGGACTGGTGAAGCCT TCGGAGACCCTGTCCCTCACCTGCACTGTCTCTGGTGGCTCCAT CAGTAGTTACTATTGGAGCTGGATCCGGCAGCCCCCAGGGAA

			GGGACTGGAATGGATTGGTTATGTCTATTACAGTGGGTACACC AAGTACAATCCCTCCCTCAAGAGTCGAGTCACCATATCAATAG ACGCGTCCAAGAACCAGTTCTCCCTGAAGCTGACCTCTGTGAC CGCTGCGGACACGGCCGTGTATTACTGTGCGACCGTCGAATCA AAGTGGAACTACGGGCCTTTTGCTATCTGGGGACAAGGGACA ATGGTCACCGTCTCTTCAGCTAGCACTAAAGGGCCTTCTGTAT TTCCCTTGGCCCCGTCCAGCAAATCGACCTCGGGAGGGACAGC CGCCCTGGGTTGCCTTGTGAAAGATTATTTCCCTGAGCCAGTT ACCGTAAGTTGGAACAGTGGGGCGCTGACAAGTGGTGTGCAC ACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGTATAGCCTCA GCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGGCACTCAGAC GTATATTTGCAATGTGAACCACAAACCTTCAAATACAAAAGTG GATAAACGCGTAGAACCGAAATCGTGTGATAAAACTCACACA TGCCCGCCATGCCCGGCACCTGAACTGCTTGGTGGTCCCAGCG TGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCTAATGATCAG CCGTACGCCAGAGGTGACATGTGTCGTGGTTGACGTGTCCCAC GAAGATCCCGAAGTTAAGTTCAATTGGTATGTTGATGGTGTAG AGGTACACAATGCTAAGACTAAACCTCGCGAGGAGCAGTACG CCTCGACCTATCGTGTCGTGAGCGTTCTGACCGTCCTTCACCA AGATTGGCTTAACGGCAAAGAATATAAGTGCAAGGTAAGCAA TAAAGCACTTCCGGCCCCAATCGAGAAAACCATTTCCAAGGCC AAAGGTCAACCAAGAGAACCCCAGGTGTATACTCTTCCGCCTT CTCGTGAGGAAATGACTAAAAATCAAGTATCCCTTACGTGTCT GGTTAAAGGTTTTTATCCTAGCGATATTGCTGTTGAATGGGAA TCGAACGGTCAGCCGGAGAATAATTATAAAACAACGCCACCC GTCCTGGATAGCGACGGCTCATTTTTTCTGTATAGCAAACTGA CTGTAGATAAATCACGGTGGCAGCAGGGCAATGTATTCAGTTG CTCCGTTATGCATGAAGCGTTACATAATCACTACACGCAGAAA TCTCTTAGTCTTTCACCCGGT
1422	ATX-P-3452	HC IgG1 Fc nt	CAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCT GGGGCCTCAGTGAAGGTCTCCTGCAAGGCTTCTGGATACACCT TCACCGGCTACTATATGAACTGGGTGCGACAGGCCCCTGGACA AGGGCTTGAGTGGATGGGATGGATCAACCCTAACAGTGGTGC CACAAACTATGCACAGAAGTTTCAGGGCAGGGTCACCATGAC CAGGGACACGTCCATCAGCACAGACTACATGGAACTGAGCAG GCTGAGATCTGACGACACGGCCGTTTATTACTGTGCGAGAGAT GGGGCTAAGTGGAATCACGAGGGTTACTACTTTGACTACTGGG GCCAGGGAACCCTGGTCACCGTCTCCTCAGCTAGCACTAAAGG GCCTTCTGTATTTCCCTTGGCCCCGTCCAGCAAATCGACCTCGG GAGGGACAGCCGCCCTGGGTTGCCTTGTGAAAGATTATTTCCC TGAGCCAGTTACCGTAAGTTGGAACAGTGGGGCGCTGACAAG TGGTGTGCACACGTTTCCTGCCGTCCTGCAATCATCGGGCTTGT ATAGCCTCAGCTCTGTGGTCACTGTCCCAAGTTCATCGCTGGG CACTCAGACGTATATTTGCAATGTGAACCACAAACCTTCAAAT ACAAAAGTGGATAAACGCGTAGAACCGAAATCGTGTGATAAA ACTCACACATGCCCGCCATGCCCGGCACCTGAACTGCTTGGTG GTCCCAGCGTGTTCCTGTTCCCGCCGAAGCCTAAAGATACTCT AATGATCAGCCGTACGCCAGAGGTGACATGTGTCGTGGTTGAC GTGTCCCACGAAGATCCCGAAGTTAAGTTCAATTGGTATGTTG ATGGTGTAGAGGTACACAATGCTAAGACTAAACCTCGCGAGG AGCAGTACGCCTCGACCTATCGTGTCGTGAGCGTTCTGACCGT CCTTCACCAAGATTGGCTTAACGGCAAAGAATATAAGTGCAA GGTAAGCAATAAAGCACTTCCGGCCCCAATCGAGAAAACCAT TTCCAAGGCCAAAGGTCAACCAAGAGAACCCCAGGTGTATAC TCTTCCGCCTTCTCGTGAGGAAATGACTAAAAATCAAGTATCC CTTACGTGTCTGGTTAAAGGTTTTTATCCTAGCGATATTGCTGT

			TGAATGGGAATCGAACGGTCAGCCGGAGAATAATTATAAAAC AACGCCACCCGTCCTGGATAGCGACGGCTCATTTTTTCTGTAT AGCAAACTGACTGTAGATAAATCACGGTGGCAGCAGGGCAAT GTATTCAGTTGCTCCGTTATGCATGAAGCGTTACATAATCACT ACACGCAGAAATCTCTTAGTCTTTCACCCGGT
1423	ATX-P-3360	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISINNWWSWVRQPPGK GLEWLGKIYHSGNTDYNPSLKSRVTISVDKSKNQFSLRLSSVTAA DTAVYYCASGSDYDFWSGYLDYWGQGTLVTVSSASTKGPSVFP LAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA VLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEP KSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVV VDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVL TVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTP PVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ KSLSLSPG
1424	ATX-P-3362	HC IgG1-Fc aa	EVQLVESGGGLVQPGRSLRLSCAASGFTFDDYAMHWVRQAPGK GLEWVSGISWNSGSIAYADSVKGRFTISRDNAKNSLYLQMNSLR VEDTAFFYCARVAAAAGIPFFDYWGQGTLVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1425	ATX-P-3363	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLTLTCAVSGGSINRDNWWSWVRQPPGK GLEWIGQIYQSGSTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAAD TAVYYCARVYDWNYGGHFDYWGQGTLVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1426	ATX-P-3365	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGDSISSNNWWSWVRQPPGK GLEWIGQIYHSGHTNYNPSLKSRVTISVDMSKNQFSLKLTSVTAA DTAVYYCARGATEILGYFDLWGRGTLVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV SHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVL HQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVL DSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLS LSPG
1427	ATX-P-3367	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCTVSGGSVSSGSYYWSWIRQPPGK GLEWIGYIYKSGFTNYNPSLKSRVTISVDTSKNQFSLKLSSVTAAD TAVYYCAIGGRGYSYGPFDYWGQGTLVTVSSASTKGPSVFPLAP SSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV

			LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1428	ATX-P-3369	HC IgG1-Fc aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYLHWVRQAPGQ GLEWMGWINPNSGDTNYVQNFQGRVTMTRDTSISTAYMELSRL RSDDTAVYYCARSYVDTSSSAFDIWGQGTMVTVSSASTKGPSVF PLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFP AVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVE PKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSV LTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVY TLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTT PPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ KSLSLSPG
1429	ATX-P-3370	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPPGKGL EWIGYVYYSGYTKYNPSLKSRVTISVDTPKTQFSLKMSSVTAADT AVYYCASVESKWNYGPFDIWGQGTMVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV SHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVL HQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVL DSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLS LSPG
1430	ATX-P-3371	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCTVSGDSISSYYWSWIRQPPGKGL EWIGYIYYSGFTKYNPSLNSRVTISVDTSKSQFSLKLTSVTAADTA VYYCAMREPRGRYNWNYGPFDIWGQGTMVTVSSASTKGPSVFP LAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA VLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEP KSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVV VDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVL TVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTP PVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ KSLSLSPG
1431	ATX-P-3373	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQPPGK GLEWIGKIYHSEFTNYNPSLKSRVTISVDKSKNQFSLELNSVTAAD TAVYYCAREYHNFMDVWCKGTTVTVSSASTKGPSVFPLAPSSKS TSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSG LYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKT HTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHE DPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQD WLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREE MTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSP G
1432	ATX-P-3375	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCTVSGDSVSSGKYFWSWIRQSPGK GLEWIGYIYYSGSTNYNPSLKNRVTISVDTSKKELSLKLSSVTAAD TAVYYCARGGHNWNYAAFDIWGQGTMVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP

			SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1433	ATX-P-3378	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQSPGK GLEWIGKIYHSEFTNYNPSLKSRVTISVDKSKNQFSLELSSVAAAD TAVYYCAREYENFMDVWGKGTTVTVSSASTKGPSVFPLAPSSKS TSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSG LYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKT HTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHE DPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQD WLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREE MTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSP G
1434	ATX-P-3382	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGDSISSNSWWNWVRQPPGK GLEWIGQIFHSGHTNYNPSLKSRVTMSIDKSKNQFSLKLTSVTAA DTALYYCARGGEYENSANWFDPWGQGTLVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1435	ATX-P-3383	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGVSINKDNWWTWVRQPPG KGLEWIGKIYHSGSTNYNPSLKSRVTISVDNSKNQFSLKLNSVTA ADTAVYYCTRGGDIAMEGDWFAPWGQGTLVTVSSASTKGPSVF PLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFP AVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVE PKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSV LTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVY TLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTT PPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ KSLSLSPG
1436	ATX-P-3384	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSDNWWNWVRQPPGK GLEWLGKIYHSGNTDYNPSLKSRVTISVDKSKNQFSLRLSSVTAA DTAVYYCARGGTETTGYMDVWGKGTTVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1437	ATX-P-3386	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQPPGK GLEWIGKIYHSGFTNYNPSLKSRVTISVDKSKNQFSLKLNSVTAA DTAVYYCARGGDNFMEGEGLGTWGPGTLVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP

			VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1438	ATX-P-3387	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWNWVRQSPGK GLEWIGKIYHSGFTDYNPSLKSRVTISVDKSKNQFSLKLSSVTAAD TAVYYCARGNHNYLWIGYLGTWGPGTLVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1439	ATX-P-3389	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLICAVSGGSISSSNWWSWVRQPPGKG LEWIGRIYHSGHTNYNPSLKSRVTISVDKSKNQFSLKLTSVTAAD TAVYYCARGRDLTGYFDYWGQGTLVTVSSASTKGPSVFPLAPSS KSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQS SGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVS HEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLH QDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR EEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD SDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSL SPG
1440	ATX-P-3391	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQSPGK GLEWIGKIYHSEFTNYNPSLKSRVTISVDKSKNQFSLELSSVTAAD TAVYYCARGVDFWSGSHMDVWGKGTTVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1441	ATX-P-3392	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQSPGK GLEWIGKIYHSEFTNYNPSLKSRVTISVDKSKNQFSLELSSVTAAD TAVYFCAREGLELPHMDVWGKGTTVTVSSASTKGPSVFPLAPSS KSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQS SGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVS HEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLH QDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR EEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD SDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSL SPG
1442	ATX-P-3395	HC IgG1-Fc aa	EVQLVESGGGVVKPGGSLRLSCAASGFTFSSYWMHWVRQAPGK GLVWVSRINSDGSSTSYADSVQGRFTISRDIAKNTLYLQMNSLRA EDTAVYYCARGQHLVQDYWGQGTLVTVSSASTKGPSVFPLAPSS KSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQS SGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVS HEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLH QDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR EEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD

			SDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSL SPG
1443	ATX-P-3396	HC IgG1-Fc aa	QVQLVQSGAEVKNPGASVKVSCKASGYTFTGYYMHWVRQAPG QGLEWMGWINPNSGGTNYAQKFQGRVTMTRDTSISTAYMELSR LRSDDTAVYYCARERGDYDGDAFDIWGQGTMVTVSSASTKGPS VFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHT FPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKR VEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVT CVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVV SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQ VYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNY KTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNH YTQKSLSLSPG
1444	ATX-P-3397	HC IgG1-Fc aa	EVQLVESGGGLVQPGGSLRLSCAASGFTFSNYYMNWVRQAPGK GLEWVANIKQDGSEKYYVDSVKGRFTISRDNAKNSLYLQMNSLR AEDTAVYYCARDGYYNFDAFDIWGQGTMVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1445	ATX-P-3405	HC IgG1-Fc aa	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYSMNWVRQAPGKG LEWVSSISSSSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAED TAVYYCAREGYDNWNSACDIWGQGTMVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1446	ATX-P-3406	HC IgG1-Fc aa	QITLKESGPTLVKPTQTLTLTCTFSGFSLSTSGVGVGWIRQPPGKA LEWLALIYWNGDERYSPSLKSRLTITKDTSKNQVVLTMTNMDPV DTATYYCAHSPNWGYEAFDIWGQGTMVTVSSASTKGPSVFPLAP SSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1447	ATX-P-3407	HC IgG1-Fc aa	EVQLVESGGGLVPPGGSLRLSCAASGFTFSSYCMNWVRQAPGKG LEWVSSINSDSSYIYYADSVKGRFTISRDNAKNSLYLQMNSLRAE DTAVYYCAREGYYNWNGGNDYWGQGTLVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP

			VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1448	ATX-P-3408	HC IgG1-Fc aa	EVQLVESGGGLVQPGGSLRLSCAASGFTFSSYWMHWVRQAPGK GLVWVSHINSDGSSTNYADSVKGRFTISRDNAKNTLYLQMNSLR SEDTAVYYCAREGYWNGDTFDIWGQGTMVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1449	ATX-P-3410	HC IgG1-Fc aa	EVQLVESGGGLVQPGGSLRLSCAASGFTFSAYDMHWVRQTPGK GLEWVSTIGTAGDTYYPDSVKGRFTISRDFARRSLYLHMNNLRA GDTAVYYCARGGSSSWYDWYFDLWGRGTLVTVSSASTKGPSVF PLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFP AVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVE PKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSV LTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVY TLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTT PPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ KSLSLSPG
1450	ATX-P-3412	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSTWWSWVRQPPGK GLEWIGEIYHSGSTNYNPSLKSRVTISLDKSKNQFSLKLSSVTAAD TAVYYCAISLYNWNDAAFDIWGQGTMVTVSSASTKGPSVFPLAP SSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1451	ATX-P-3413	HC IgG1-Fc aa	QVQLVQSGSEVKKPGASVKVSCKTSGYTFTGYYMHWVRQAPGQ GLEWMGWINPNSGGTTYAQKFQGRVTMTRDTSISTAYMELNRL RSDDTAVYYCAREAGGSGEYFQHWGQGTPVTVSSASTKGPSVFP LAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA VLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEP KSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVV VDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVL TVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTP PVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ KSLSLSPG
1452	ATX-P-3414	HC IgG1-Fc aa	QITLKESGPTLVKPTQTLTLTCTFSGFSLSTSGVGVGWIRQPPGKA LEWLALIYWNDVKFYSPSLQSRLTITKDTSKNQVVLTLTNMDPV DTATYYCAHGDNWNYRAFDIWGQGTMVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV

			LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1453	ATX-P-3419	HC IgG1-Fc aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYGISWVRQAPGQ GLEWMGWISAYNGNTHYAQNLQGRVTMTTDTSTSTAYMELRSL RSDDTAVYYCARSIAALDFWGQGTPVTVSSASTKGPSVFPLAPSS KSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQS SGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVS HEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLH QDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR EEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD SDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSL SPG
1454	ATX-P-3421	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSNNWWSWVRQPPGK GLEWIGQIYHSENTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAA DTAIYYCARVDDWNYGGHFDYWGQGTLVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1455	ATX-P-3428	HC IgG1-Fc aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYGISWVRQAPGQ GLEWMGWISAYNGNTHYAQNLQGRVTMTTDTSTNTAYMELRS LISDDTAFYYCARAGLGIDYWGQGTLVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV SHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVL HQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVL DSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLS LSPG
1456	ATX-P-3430	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSDWWSWVRQSPGK GLEWIGEIYHSGSTNYNPSLKSRVSISVDKSKNQFSLKLSSVTAAD TAVYYCARGGHIGYYYMDVWGKGTTVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV SHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVL HQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVL DSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLS LSPG
1457	ATX-P-3431	HC IgG1-Fc aa	EVQLVQSGAEVKKPGESLKISCKGSGYSFTNYWIGWVRQMPGKG LEWMGIIYPGDSDTIYSPSFQGQVTFSADKSINTAYLQWSSLKASD TAMYYCARGRGYSGYEGAFDIWGQGTMVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP

			VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1458	ATX-P-3435	HC IgG1-Fc aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTNYGISWVRQAPGQ GLEWMGWISAYNGNTHYAQKLQGRVTMTTDTSTSTAYMELRSL RSDDTAVYYCARAAAAVDYWGQGTLVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV SHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVL HQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVL DSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLS LSPG
1459	ATX-P-3436	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLSCTVSGGSVSSGSYYWSWIRQPPGK GLEWIGYIYYSGSTKYNPSLKSRVTISVDTSKNQVSLKLSSVTAA DTAVYYCARDKGHWNYGAFDIWGQGTMVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1460	ATX-P-3437	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSNNWWSWVRQPPGK GLEWIGEIYHSGNINYNPSLKSRVTISVDKSKNQFSLKLSSVTAAD TAVYYCARGGEYGDPVGYFDLWGRGTLVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1461	ATX-P-3440	HC IgG1-Fc aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTTYGISWVRQAPGQ GLEWMGWISAYSGNTNYAQKLQGRVTMTTDTSTSTAYMELRSL RSDDTAVYYCARERVSNWVFDFWGQGTLVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1462	ATX-P-3442	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSSDWWSWVRQPPGK GLEWIGEIYHSRNTNYNPSLKSRVTISVDKSKNQFSLKLSSVTAAD TAVYYCASGGVVADYYMDVWGKGTTVTVSSASTKGPSVFPLAP SSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV

			LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1463	ATX-P-3444	HC IgG1-Fc aa	EVQLVESGGGLVKPGGSLRLSCAASGFTFSSYGMNWVRQAPGK GLEWVSSISGYGSYIYYAASVKGRFTISRDSAKNSLYLQMNSLSA EDTAVYYCARELGGIYYGVGYFDLWGRGTLVTVSSASTKGPSVF PLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFP AVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVE PKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSV LTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVY TLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTT PPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ KSLSLSPG
1464	ATX-P-3447	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCAVSGGSVSSGNYYWSWIRQPPG KGLEWIGYIYSSGSTNYNPSLKSRVTISIDTSKNQFSLKLSSVTAA DTAVYYCARSPRGYSYGPFAYWGQGTLVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1465	ATX-P-3448	HC IgG1-Fc aa	QVQLQESGPGLVKPSQTLSLTCTVSGGSISSGGYNWNWIRQHPGK GLEWIGYINYSGNTYYNPSLKSRVTISVDTSKNQFSLKLSSVTAA DTAVYYCARGPLDTAMAPFDYWGQGTLVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1466	ATX-P-3449	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCTVSGDSISSYYWSWIRQPPGKGL EWIGYIYYSGFTKYNPSLKSRVTISVDTSKNQFSLRLSSVTAADTA VYYCASVDSKWNYGSFHIWGQGTMVTVSSASTKGPSVFPLAPSS KSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQS SGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVS HEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLH QDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR EEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD SDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSL SPG
1467	ATX-P-3450	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCSVSGDSVSNNRYYWSWIRQPPGK GLEWIGYIYYSGSTNYNPSLKSRVTISVDTSKNQLSLNLSSVTAAD TAVYYCARDRPSRYKWNYDAFAIWGQGTMVTVSSASTKGPSVF PLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFP AVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVE PKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSV LTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVY TLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTT

			PPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPG
1468	ATX-P-3451	HC IgG1-Fc aa	QVQLQQWGAGLLKPSETLSLTCAVYGGSFSDYYWTWIRQPPGKGLEWIGEVNHIGSTNYNPSLKSRVTISVDTSKNQFSLNLSSVTAADTAVYYCAKYSTSWYGWFDPWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPG
1469	ATX-P-3453	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGDSISSNNWWSWFRQPPGKGLEWIGRIYHSGTTNYNPSLESRVTISVDNSRNQFSLKLSSVTAADTAVYYCARGEEWELRGGVFDIWGQGTMVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPG
1470	ATX-P-3454	HC IgG1-Fc aa	QVQLVQSGPELKKPGASVKVSCKASGYTFTNYAVNWVRQAPGQGLEWMGWINTNTGHPTYAQGFTGRFVFSLDTSVSTAYLQISSLKAEDTAVYYCARDSSSWGYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPG
1471	ATX-P-3455	HC IgG1-Fc aa	QVQLQESGPGLVTPSGTLSLTCAVSGDSISSDNWWSWVRQPPGKGLEWIGEIYHSENTNYNPSLKSRVTISVDKSKNQFSLRLNSVTAADTAMYYCARGRELTGLFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPG
1472	ATX-P-3456	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSNNWWSWVRQPPGKGLEWIGDIYHSGNTNYNPSLKSRVTLSVDMSKNQFSLKLNSVTAADTAVYYCARGGIAVTAYFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV

			LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1473	ATX-P-3458	HC IgG1-Fc aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYLHWVRQAPGQ GLEWMGWINPHSGGTIYAQKFQDRVTMTRDTSISTAYMELSRLR SDDTAVYYCANWNSGDSYYYYMDVWGKGTTVTVSSASTKGPS VFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHT FPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKR VEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVT CVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVV SVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQ VYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNY KTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNH YTQKSLSLSPG
1474	ATX-P-3459	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSDNWWNWVRQPPGK GLEWIGKIYHSGNTNYNPSLKSRVTISVDESKNQFSLRLYSVTAA DTAVYYCARGVDFWSGSHMDVWGKGTTVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1475	ATX-P-3462	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSNNWWSWVRQAPGK GLEWIGKIYQSGSTMYNPSLKSRVTMSVDKSKNQFSLILSSVTAA DTAVYYCARDKPPLLGAFDYWGQGTLVTVSSASTKGPSVFPLAP SSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1476	ATX-P-3463	HC IgG1-Fc aa	QVQLVESGGGVVQPGRSLRLSCAASGFTFSSYAMHWVRQAPGK GLEWVAVISYDGSNKYYADSVKGRFTISRDNSKNTLSLQMNSLR AEDTAVYYCAKRGGYSYGPFEHWGQGTLVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1477	ATX-P-3466	HC IgG1-Fc aa	QVQLVQSGSELKKPGASVKVSCKASGYTFTSYTMNWVRQAPGQ GLEWVGWINTATGTPTYAQGFTGRYVFSLDTSVSTAYLQISGLK AEDTAVYFCARYSGSHSFDYWGQGTLVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV SHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVL HQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVL

			DSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLS LSPG
1478	ATX-P-3467	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISSDYWWSWVRQSPGK GLEWIGKIYHSGNTNHNPSLKSRVTISIDKSRNQFSLNLNSVTAAD TAVYYCAREGLELPHMDVWGKGTTVTVSSASTKGPSVFPLAPSS KSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQS SGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVS HEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLH QDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR EEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD SDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSL SPG
1479	ATX-P-3468	HC IgG1-Fc aa	QVQLVESGGGLVQPGRSLRLSCAASGFTFSSYAMHWVRQAPGK GLEWVTVISYDGSNKYYADSVKGRFTISRDNSKNTLYLQMNSLR AEDTAVYYCAKRGNWNYGPFHYWGQGTLVTVSSASTKGPSVFP LAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA VLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEP KSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVV VDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVL TVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTP PVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQ KSLSLSPG
1480	ATX-P-3469	HC IgG1-Fc aa	QVQLVESGGGVVQPGRSLRLSCAASGFTFSAYAIHWVRQAPGKG LEWVAVISYDGSNKKYADSVKGRFTISRDNSKNTLDLEMNSLRA EDTAVYYCAKGLPFDYWGQGTLVTVSSASTKGPSVFPLAPSSKST SGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGL YSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKTH TCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHED PEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQD WLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREE MTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSP G
1481	ATX-P-3470	HC IgG1-Fc aa	QVQLVQSGSDLKKPGASVKVSCKASGYTFTSYTMNWVRQAPGQ GLEWMGWINTNTGTPTYAQGFTGRFVFSLDTSVSTAYLQISSLKA EDTAVYYCTRYTGNYSFDYWGQGTLVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV SHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVL HQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVL DSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLS LSPG
1482	ATX-P-3471	HC IgG1-Fc aa	EVQLVESGGVLVQPGGSLRLSCAASGFTFRSYAMSWVRQAPGKG LEWVSAISGSGDSTYFADSVKGRFTISRDNSKNTLSLQMNSLRAE DTAVYYCASILGYCSGTSCYGLFDNWGQGTLVTVSSASTKGPSV FPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTF PAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRV EPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTC VVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVS VLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQV YTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYK

			TTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHY TQKSLSLSPG
1483	ATX-P-3472	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGGSISNDNWWSWVRQSPGK GLEWIGKIYHSEFTNYNPSLRSRVTISVDKSKNQFSLELTSVTAAD TAVYYCAREYQNYMDVWGKGTTVTVSSASTKGPSVFPLAPSSKS TSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSG LYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKT HTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHE DPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQD WLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREE MTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSP G
1484	ATX-P-3361	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCVVSGDSISSNNWWSWVRQPPGK GLEWIGQIYHSGITNYNPSLKSRVTISVDKSKNQFSLELTSVTAAD AAVYYCARAQWELRAGWFDPWGQGTLVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1485	ATX-P-3366	HC IgG1-Fc aa	EVQLVESGGGLVKPGGTLTLSCAASGFTFSNAWMSWVRQAPGK GLEWVGRIKSKTDGGTTDYAAPVKGRFTISRDDSKNTLYLQMNS LKTEDTAVYYCTPRYNSDFDYWGQGTLVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1486	ATX-P-3376	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPPGKGL EWIGYIYYSGFTKYNPSLKSRVTISVDTSKNQFSLKLSSVTAADTA VYYCATHPRGYNYGPFDYWGQGTLVTVSSASTKGPSVFPLAPSS KSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQS SGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCD KTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVS HEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLH QDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR EEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLD SDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSL SPG
1487	ATX-P-3377	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCTVSGGSVNSGRYYWSWIRQPPG KGLEWIGYIYSSGYTNYNPSLKSRVTMLLDTSKNQFSLKLNSVTA ADTAVYYCARSRGYRYGPFDYWGQGTLVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV

			LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1488	ATX-P-3418	HC IgG1-Fc aa	QVQLVQSGSELKKPGASVKVSCEASGYTFTSYAMNWVRQAPGQ GLEWMGWINTNTGTPTYAQGFTGRFVFSLDTSVSTAYLQISSLKA EDTAVYYCASHSTSFDYWGQGTLVTVSSASTKGPSVFPLAPSSKS TSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSG LYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSCDKT HTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHE DPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVLHQD WLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREE MTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSP G
1489	ATX-P-3420	HC IgG1-Fc aa	QVQLQQWGAGLVKPSETLSLTCAVHGGSFSDYYLTWIRQPPGKG LEWIGEINHSGSTNYNPSLKSRVTLSIDTSKNQFSLKLSSVTAADT AVYYCARGSEDYYYYMDVWGKGTTVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV SHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVL HQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVL DSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLS LSPG
1490	ATX-P-3426	HC IgG1-Fc aa	EVQLVQSGAEVKKPGESLKISCKGSGYIFTSYWIGWVRQMPGKG LEWMGIIYPGDSDTRYSPSFQGQVTISADKSITAYLQWSSLKASD TAMYYCARHDYFDIGGYFDYWGQGTLVTVSSASTKGPSVFPLAP SSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1491	ATX-P-3432	HC IgG1-Fc aa	QVQLVQSGAEVKKPGASVKVSCKADGYTFTDYYMHWVRQAPG QGHEWMGWINPNSGVTYYAQKFQGRVTMTRDTSISTAYMELNR LRSDDTAVYYCARDRTFYFDYWGQGTLVTVSSASTKGPSVFPLA PSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1492	ATX-P-3433	HC IgG1-Fc aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTDYYMHWVRQAPG QGLEWMGWINPNNGGTDYAQKFQGRVTMTRDTSISTAYMELHR LRSDDTAVYFCARGVYDVVVPTAIVNWFDPWGQGTLVTVSSAS TKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALT SGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTK VDKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRT PEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYAST YRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQP REPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPE

			NNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEAL HNHYTQKSLSLSPG
1493	ATX-P-3438	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGDSISNDYWWNWVRQPPGK GLEWIGEIYHSGHTNYNPSLKSRVTISVDKSKNQLSLKLTSVNAA DTAVYYCARGGTEITGYMDVWGKGTTVTVSSASTKGPSVFPLAP SSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVL QSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKS CDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVD VSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTV LHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPP SREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPV LDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL SLSPG
1494	ATX-P-3441	HC IgG1-Fc aa	QVQLQESGPGLVKPSGTLSLTCAVSGASIRSGHWWSWVRQPPGK GLEWIGEIYHSGNTNYNPSLKSRVTLSVDKSKNQFSLKLSSVTAA DTAVYYCARGHYGDYVVYFDYWGQGTLVTVSSASTKGPSVFPL APSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAV LQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPK SCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVV DVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLT VLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTL PPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPP VLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQK SLSLSPG
1495	ATX-P-3446	HC IgG1-Fc aa	QVQLQESGPGLVKPSETLSLTCTVSGGSISSYYWSWIRQPPGKGL EWIGYVYYSGYTKYNPSLKSRVTISIDASKNQFSLKLTSVTAADT AVYYCATVESKWNYGPFAIWGQGTMVTVSSASTKGPSVFPLAPS SKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQ SSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKRVEPKSC DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDV SHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTYRVVSVLTVL HQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPS REEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVL DSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLS LSPG
1496	ATX-P-3452	HC IgG1-Fc aa	QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYMNWVRQAPG QGLEWMGWINPNSGATNYAQKFQGRVTMTRDTSISTDYMELSR LRSDDTAVYYCARDGAKWNHEGYYFDYWGQGTLVTVSSASTK GPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSG VHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKV DKRVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTP EVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYASTY RVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPR EPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPEN NYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALH NHYTQKSLSLSPG

[00217] Table 10: Anti-C3 antibodies (LC Kappa sequences)

SEQ ID NO:	Antibody Name:	Descriptor:	Sequence:
1497	ATX-P-3360	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT

			ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1498	ATX-P-3362	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1499	ATX-P-3363	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1500	ATX-P-3365	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT

			CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1501	ATX-P-3367	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1502	ATX-P-3369	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1503	ATX-P-3370	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC

			TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1504	ATX-P-3371	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1505	ATX-P-3373	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1506	ATX-P-3375	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1507	ATX-P-3378	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG

			AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1508	ATX-P-3382	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1509	ATX-P-3383	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1510	ATX-P-3384	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC

			AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1511	ATX-P-3386	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1512	ATX-P-3387	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1513	ATX-P-3389	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA

			TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1514	ATX-P-3391	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1515	ATX-P-3392	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1516	ATX-P-3395	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT

1517	ATX-P-3396	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1518	ATX-P-3397	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1519	ATX-P-3405	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1520	ATX-P-3406	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC

			GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1521	ATX-P-3407	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1522	ATX-P-3408	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1523	ATX-P-3410	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT

1524	ATX-P-3412	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1525	ATX-P-3413	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1526	ATX-P-3414	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGCGTCACCATCACTTGCCGGGCCAGTCAG AATATTATTACCTGGTTGGCTTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATAAGGCGTCTAGTTTAG AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG GACAGAATTCACTCTCACCATCAGCAGCCTGCAGCCTGATG ATTTTGCAACTTATTACTGCCAACAGTATAGTAGTTATTCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1527	ATX-P-3419	LC Kappa nt	GCCATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCT GTAGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGG GCATTAGAAATGATTTAGGCTGGTATCAGCAGAAACCAGG GAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTAC AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG CACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCTGAAG ATTTTGCAACTTATTACTGTCTACAAGATTACAATTACCCGT GGACGTTCGGCCAAGGGACCAAGGTGGAAATCAAACGTAC

			GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1528	ATX-P-3421	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG ACTGTTTTGTACAGGTCCAACAATAAGAACTACTTAGCTTG GTATCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTGGACGTTCGGCCAAGGGACCAAG GTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1529	ATX-P-3428	LC Kappa nt	GCCATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCTTCT GTAGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGG GCATTAGAAATGATTTAGGCTGGTATCAGCAGAATCCCGGG AAAGCCCCTAAGCTCCTGATTTATGCTGCATCCAATTTACA AAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGGC ACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCTGAAGA TTTTGTTACTTATTACTGTCTACAAGATTACAATTGGCCGTG GACGTTCGGCCAAGGGACACGACTGGAGATTAAACGTACG GTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGAG CAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAA TAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCG ACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACG GAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCAC CCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTC ACAAAATCGTTTAACCGCGGTGAGTGT
1530	ATX-P-3430	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAG AGCATTAGCAACTATTTAAATTGGTATCAACAGAAACCAGA GAAAGCCCCTAAGTTCCTGATCTATGCTGCATCCAGTTTGC AAAGTGGGGTCCCATCAAGGTTCAGTGGCAGTGGATCTGG GACAGATTTCACTCTCACCATCAGCAGTCTGCAACCTGAAG ATTTTGCAACTTACTACTGTCAACAGAGTTACAGTTCCCCG CTCACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG

			TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT
1531	ATX-P-3431	LC Kappa nt	GAAATTGTGTTGACTCAGTCTCCAGACTTTCAGTCTGTGACT CCAAAGGAGAAAGTCACCATCACCTGCCGGGCCAGTCAGA GCATTGGTAGTAACTTACACTGGTTCCAGCAGAAACCAGAT CAGTCTCCAAAACTCCTCATCAAGTATGCTTCCCAGTCCTTC TCAGGGGTCCCCTCGAGGTTCAGTGGCAGTGGATCTGGGAC AGATTTCACCCTCACCATCAATAGCCTGGAAGCTGAAGATG CTGCAATGTATTACTGTCATCAGAGTAGTAGTTTACCTCGG ACGTTCGGCCAAGGGACCAAGGTGGAAATCAAACGTACGG TAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGAGC AGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGA CAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGG AGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCACC CTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTC ACAAAATCGTTTAACCGCGGTGAGTGT
1532	ATX-P-3435	LC Kappa nt	GCCATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATCT GTAGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAGG GCATTAGAAATGATTTAGGCTGGTATCAGCAGAAACCAGG GAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTAC AAAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGG CACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCTGAAG ATTTTGCATCTTATTACTGTCTACAAGATTACAATTGGCCGT ACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1533	ATX-P-3436	LC Kappa nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTC TCCAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAG AGTGTTAGAAGCAGCTACTTTGCCTGGTACCAGCAGAAACC TGGCCAGGCTCCCAGGCTCCTCATCTATGGTGCATCCAGCA GGGCCACTGGCATCCCAGACAGGTTCAGTGGCAGTGGGTCT GGGACAGACTTCACTCTCACCATCAGCAGACTGGAGCCTGA AGATTTTGCAGTGTATTACTGTCAGCAGTATGGTAGCTCAC CTCGGACGTTCGGCCAAGGGACCAAGGTGGAAATCAAACG TACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGC TGAATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAA GTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGT TACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCT CCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAA AGTTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTC CGGTCACAAAATCGTTTAACCGCGGTGAGTGT
1534	ATX-P-3437	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG

			CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTTTGGTACTCCTCGGACGTTCGGCCAAGGGACCAAG GTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1535	ATX-P-3440	LC Kappa nt	GAAATTGTGTTGACACAGTCTCCAGCCACCCTGTCTTTGTCT CCAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAGA GTGTTAGCAGCTACTTAGCCTGGTACCAACAGAAACCTGGC CAGGCTCCCAGGCTCCTCATCTATGATGCATCCAACAGGGC CACTGGCATCCCAGCCAGGTTCAGTGGCAGTGGGTCTGGGA CAGACTTCACTCTCACCATCAGCAGCCTGCAGTCTGAAGAT TTTGCAGTTTATTACTGTCAGCAGCGTAGCAATTGGCCGCT CACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTACG GTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGAG CAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAA TAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCG ACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACG GAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCAC CCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTC ACAAAATCGTTTAACCGCGGTGAGTGT
1536	ATX-P-3442	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAG ACCATTAGGAGCTATTTAAATTGGTATCAGCAGAAACCAGG GAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGC AAAGTGGGGTCCCATCAAGGTTCAGTGGCAGTGGATCTGG GACAAATTTCACTCTCACCATCAGCAGTCTGCAACCTGAAG ATTTTGCAACTTACTCCTGTCAACAGAGTTACACTACCCCG CTCACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT
1537	ATX-P-3444	LC Kappa nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTC TCCAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAG AGTATTAGCAGCAGCTACTTAGCCTGGTACCAGCGGGAACC TGGCCAGGCTCCCAGGCTCCTCATCTATGGTGCATCCAGCA GGGCCACTGGCATCCCAGACAGGTTCAGTGGCAGTGGGTCT GGGACAGACTTCACTCTCACCATCAGCAGACTGGAGCCTGA AGATTTTGTAGTGTATTACTGTCAACAATATGGTAGCTCAC CGATCACCTTCGGCCAAGGGACACGACTGGAGATTAAACG TACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGC TGAATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAA GTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGT TACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCT

			CCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAA AGTTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTC CGGTCACAAAATCGTTTAACCGCGGTGAGTGT
1538	ATX-P-3447	LC Kappa nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTC TCCAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAG AGTGTTCGCAGCAGCTACTTAGCCTGGTACCAGCAGAAACC TGGCCAGGCTCCCAGGCTCCTCATCTATGGTGCATCCAGCA GGGCCACTGGCATCCCAGACAGGTTCAGTGGCAGTGGGTCT GGGACAGACTTCACTCTCACCTTCAGCAGACTGGAGCCTGA AGATTTTGCAGTGTATTACTGTCAGCAGTATGGTAGCTCAC CGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACG TACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGC TGAATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAA GTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGT TACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCT CCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAA AGTTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTC CGGTCACAAAATCGTTTAACCGCGGTGAGTGT
1539	ATX-P-3448	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCAGGCGAGTCAG GACATTAGCAACTATTTAAATTGGTATCAGCAGAAACCAGG GAAAGCCCCTAAGCTCCTGATCTACGATGCATCCAATTTGG AAACAGGGGTCCCATCAAGGTTCAGTGGAAGTGGATCTGG GACAGATTTTACTTTCACCATCAGCAGCCTGCAGCCTGAAG ATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCG CTCACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT
1540	ATX-P-3449	LC Kappa nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTC TCCAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAG AGTGTTAGCAGCAGCTACTTAGCCTGGTACCAGCAGAAACC TGGCCAGGCTCCCAGGCTCCTCATCTATGGTGCATCCAGCA GGGCCACTGGCATCCCAGACAGGTTCAGTGGCAGTGGGTCT GGGACAGACTTCACTCTCACCATCAGCAGACTGGAGCCTGA AGATTTTGCAGTGTATTACTGTCAGCAGTATGGTAGCTCAC CATTCACTTTCGGCCCTGGGACCAAAGTGGATATCAAACGT ACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGAC GAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCT GAATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAG TCGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTT ACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTC CACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAA GTTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCC GGTCACAAAATCGTTTAACCGCGGTGAGTGT
1541	ATX-P-3450	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC

			AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTGGACGTTCGGCCAAGGGACACGA CTGGAGATTAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1542	ATX-P-3451	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCGGGCGAGTCAG GACATTAGCAACTATTTAAATTGGTATCAGCAGAAACCAGG GAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGG AAAGTGGGGTCCCATCAAGGTTCAGTGGCAGTGGATCTGG GACAGATTTCACTCTCACCATCAGCAGTCTGCAACCTGAAG ATTTTGCAACTTACTACTGTCAACAGAGTTACAGTACCCCT ACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTACGG TAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGAGC AGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAAT AATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCGA CAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACGG AGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCACC CTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTC ACAAAATCGTTTAACCGCGGTGAGTGT
1543	ATX-P-3453	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGGTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGCCAGCCTCCTAAACTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATGGTACTCCTCGGACGTTCGGCCAAGGGACCAAG GTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1544	ATX-P-3454	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCAGGCGAGTCAG GACATTAAGAACTGTTTAAATTGGTATCAGCAGAAACCAGG GAAAGCCCCTAAGCTCCTGATCTACGATGCATCCAATTTGG AAACAGGGGTCCCATCAAGGTTCAGTGGAAGTGGATCTGG GACAGATTTTACTTTCACCATCAGCAGCCTGCAGCCTGAAG ATATTGCAACATATTACTGTCAACAGTTTGATAATCTCCCTC TCACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC

			GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1545	ATX-P-3455	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG ACTATTTTATACAGGTCCAACATTAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAACTGCTCATTT CCTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCGGACGTTCGGCCAGGGGACCAAGCTG GAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTT CCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTCTGT AGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAG TACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCA CAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCACAT ATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGACTAT GAAAAACATAAAGTTTACGCATGTGAGGTGACGCACCAAG GATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGAG TGT
1546	ATX-P-3456	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCTCGGACGTTCGGCCAAGGGACCAAG GTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1547	ATX-P-3458	LC Kappa nt	GACATCCAGATGACCCAGTCTCCTTCCACCCTGTCTGCATC TGTAGGAGACAGAGTCACTATCACTTGTCGGGCGAGTCAG GGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCAG GGAAAGCCCCTAAACTCCTGATCTATGCTGCATCCAGTTTG CAGAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTG GGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCTGAA GATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCT CTCACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT

1548	ATX-P-3459	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCTCCGACGTTCGGCCAAGGGACCAAG GTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1549	ATX-P-3462	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAG AGCATTAGCAGCTATTTAAATTGGTATCAGCAGAAACCAGG GAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGC AAAGTGGGGTCCCATCAAGGTTCAGTGGCAGTGGATCTGG GACAGATTTCACTCTCACCATCAGCAGTCTGCAACCTGAAG ATTTTGCAACTTACTACTGTCAACAGAGTTACAGTACCCCG TACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT
1550	ATX-P-3463	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATTTTATGATACTCCTCGGACGTTCGGCCAAGGGACCAAG GTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1551	ATX-P-3466	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCGGGCGAGTCAG GGCATTAGCAATTATTTAGCCTGGTATCAGCAGAAACCAGG GAAAGTTCCTAAGCTCCTGATCTATGTTGCATCCACTTTGC AATCAGGGGTCCCATCTCGGTTCAGTGGCAGTGGATCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCTGAAGA

			TGTTGCAACTTATTACTGTCAAAATTATATCAGTGCCCCGCT CACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTACG GTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGAG CAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAA TAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCG ACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACG GAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCAC CCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTC ACAAAATCGTTTAACCGCGGTGAGTGT
1552	ATX-P-3467	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTGGACGTTCGGCCAAGGGACCAAG GTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1553	ATX-P-3468	LC Kappa nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTC TCCAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAG AGTGTTAGCAGCAGCTACTTAGCCTGGTACCAGCAGAAACC TGGCCAGGCTCCCAGGCTCCTCATCTATGGTGCATCCAGCA GGGCCACTGGCATCCCAGACAGGTTCAGTGGCAGTGGGTCT GGGACAGACTTCACTCTCACCATCAGCAGACTGGAGCCTGA AGATTTTGCAGTGTATTACTGTCAGCAGTATGGTAGCTCAC CGTACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACG TACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGC TGAATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAA GTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGT TACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCT CCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAA AGTTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTC CGGTCACAAAATCGTTTAACCGCGGTGAGTGT
1554	ATX-P-3469	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCAACATCACTTGCCGGGCGAGTCAG GGCATTAGCAATTATTTAGCCTGGTATCAGCAGAAACCAGG GAAAGTTCCTAAGCTCCTGATCTATGCTGCATCCACTTTGC AATCAGGGGTCCCATCTCGTTTCAGTGGCAGTGGATCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCTGAAGA TGTTGCAAGTTATTTCTGTCAAAAATATATCAGTGCCCCGCT CACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTACG GTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGAG CAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAA TAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCG ACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACG GAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCAC

			CCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTC ACAAAATCGTTTAACCGCGGTGAGTGT
1555	ATX-P-3470	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCGGGCGAGTCAG GGCATTAGCAATTATTTAGCCTGGTATCAGCAGAAACCAGG GAAAGTTCCTAAGCTCCTGATCTATGCTGCATCCACTTTGC AATCAGGGGTCCCATCTCGGTTCAGTGGCAGTGGATCTGGG ACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCTGAAGA CGTTGCAAGTTATTACTGTCAAGATTATACCAGTGCCCCGC TCACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTAC GGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGA GCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGA ATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTC GACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTAC GGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCA CCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGT TTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGG TCACAAAATCGTTTAACCGCGGTGAGTGT
1556	ATX-P-3471	LC Kappa nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTC TCCAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAG AGTGTTAGTGACAGCTACTTAGCCTGGTACCAGCAGGAACC TGGCCAGGCGCCCAGGCTCCTCATCTATGGTGCATCCAGCA GGGCCACTGGCATCCCAGACAGGTTCAGTGGCAGTGGGTCT GGGACAGACTTCACTCTCACCATCAGCAGACTGGAGCCTGA AGATTTTGCATTATATTACTGTCAGCAATATGATTCCTCGCC ATTCACTTTCGGCCCTGGGACCAAAGTGGATATCAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT
1557	ATX-P-3472	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1558	ATX-P-3361	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT

			ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1559	ATX-P-3366	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1560	ATX-P-3376	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1561	ATX-P-3477	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTAACCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCTCCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCGTACACTTTTGGCCAGGGGACCAAG CTGGAGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT

			CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1562	ATX-P-3418	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACCTGCCGGGCAAGTCAG ACCATTAGAAACTTTTTAAATTGGTATCAGCGGAAACCAGG GAAAGCCCCTAAGATCCTGATCTATGCTGCATCCAGTTTGC AAAGTGGGGTCCCATCAAGGTTCAGTGGCAGTGGATCTGG GACAGATTTCACTCTCACCATCAGCAGTCTGCAACCTGCAG ATTTTGCAACTTACTACTGTCAACAGACTTACAGTATCCCG ATCACCTTCGGCCAAGGGACACGACTGGAGATTAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT
1563	ATX-P-3420	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAG AGCATTAGCAGGTATTTAAATTGGTATCAGCAGAAACCAGG GAAAGCCCCTAAACTCCTGCTCTATGCTGCATCCAGTTTGC AAAGTGGGGTCCCATCAAAGTTCAGCGGCAGTGGATCTGG GACAGATTTCACTCTCACCATCAGCAGCCTGCAACCTGAAG ATTTTGCAACTTACTACTGTCAACAGAGTTACAGTTCCCCG ATCACCTTCGGCCAAGGGACACGACTGGAGATTAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT
1564	ATX-P-3426	LC Kappa nt	GATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACC CCTGGAGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGAG CCTCCTGCATAGTAATGGATACAACTATTTGGATTGGTACC TGCAGAAGCCAGGGCAGTCTCCACAGCTCCTGATCTATTTG GGTTCTAATCGGGCCTCCGGGGTCCCTGACAGGTTCAGTGG CAGTGGATCAGGCACAGATTTTACACTGAAAATCAGCAGA GTGGAGGCTGAGGATGTTGGGGTTTATTACTGCATGCAAAC TCTACAAACTCCTCCGACGTTCGGCCAAGGGACCAAGGTGG AAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTC CGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTCTGTA GTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGT ACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCA CAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCACAT ATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGACTAT GAAAAACATAAAGTTTACGCATGTGAGGTGACGCACCAAG

			GATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGAG TGT
1565	ATX-P-3432	LC Kappa nt	GACATCCAGTTGACCCAGTCTCCATCCTTCCTGTCTGCATCT GTAGGAGACAGACTCACCATCACTTGCCGGGCCAGTCAGG GCATTAGCAGTTATTTAGCCTGGTATCAGCAAAAACCAGGG AAAGCCCCTAAGCTCCTGATCTATACTGCATCCACTTTACA AAGTGGGGTCCCATCAAGGTTCAGCGGCAGTGGATCTGGG ACAGAATTCACTCTCACAATCAGCAGCCTGCAGCCTGAAGA TTTTGCAACTTATTACTGTCAACAGCTTAATGGTTACCCTCC GACGTTCGGCCAAGGGACCAAGGTGGAAATCAAACGTACG GTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACGAG CAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTGAA TAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGTCG ACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTACG GAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCCAC CCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAGTTT ACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCGGTC ACAAAATCGTTTAACCGCGGTGAGTGT
1566	ATX-P-3433	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGACAGAGTCACCATCACTTGCCGGGCAAGTCAG AGCATTACCAGCTATTTAAATTGGTATCAGCAGAAACCAGG GAAAGCCCCTAAGCTCCTGATCTTTGCTGCATCCAGTTTGC AAAGTGGGGTCCCATCAAGGTTCAGTGGCAGTGGATCTGG GACAGATTTCACTCTCACCATCAGCAGTCTGCAACCTGAAG ATTTTGCAACTTACTACTGTCAACAGAGTTACAGTACCCCT CTCACTTTCGGCGGAGGGACCAAGGTGGAGATCAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT
1567	ATX-P-3438	LC Kappa nt	GACATCGTGATGACCCAGTCTCCAGACTCCCTGGCTGTGTC TCTGGGCGAGAGGGCCACCATCAACTGCAAGTCCAGCCAG AGTGTTTTATACAGCTCCAACAATAAGAACTACTTAGCTTG GTACCAGCAGAAACCAGGACAGCCTCCTAAGCTGCTCATTT ACTGGGCATCTACCCGGGAATCCGGGGTCCCTGACCGATTC AGTGGCAGCGGGTCTGGGACAGATTTCACTCTCACCATCAG CAGCCTGCAGGCTGAAGATGTGGCAGTTTATTACTGTCAGC AATATTATAGTACTCCTCGGACGTTCGGCCAGGGGACCAAG GTGGAAATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTAT CTTTCCGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTT CTGTAGTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTA AAGTACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAA TTCACAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCA CATATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGAC TATGAAAAACATAAAGTTTACGCATGTGAGGTGACGCACC AAGGATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGT GAGTGT
1568	ATX-P-3441	LC Kappa nt	GACATCCAGATGACCCAGTCTCCATCCTCCCTGTCTGCATC TGTAGGAGAAAGAGTCACCATCACTTGCCGGGCAAGTCAG AGCATTAGCAGCTATTTAAATTGGTATCAGCAGAAACCAGG GAAAGCCCCTAACCTCCTGATCTATGCTGCATCCAGTTTCC AAAGTGGGGTCCCATCAAGGGTCAGTGGCAGTGGATCTGG

			GACAGATTTCACTCTCACCATCAGCAGTCTGCAACCTGAGG ATTTTGCAACTTACTACTGTCAACAGAGTTACAGTAACCCG TACACTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGTA CGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGACG AGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGCTG AATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAAGT CGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGTTA CGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCTCC ACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAAAG TTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTCCG GTCACAAAATCGTTTAACCGCGGTGAGTGT
1569	ATX-P-3446	LC Kappa nt	GAAATTGTGTTGACGCAGTCTCCAGGCACCCTGTCTTTGTC TCCAGGGGAAAGAGCCACCCTCTCCTGCAGGGCCAGTCAG AGTGTTAGTAGAAGCTACTTAGCCTGGTACCAGCAGAAACC TGGCCAGGCTCCCAGGCTCCTCATCTATGGTGCATCCAGCA GGGCCACTGGCATCCCAGACAGGTTCAGTGGCAGTGGGTCT GGGACAGACTTCACTCTCACCATCAGCAGACTGGAGCCTGA AGATTTTGCAGTGTATTACTGTCAGCAGTATGGTAGCTCAC CGTGGACGTTCGGCCAAGGGACCAAGGTGGAAATCAAACG TACGGTAGCTGCCCCTTCAGTTTTTATCTTTCCGCCGTCTGA CGAGCAGTTAAAATCCGGGACCGCTTCTGTAGTTTGCCTGC TGAATAATTTTTATCCGCGTGAGGCTAAAGTACAATGGAAA GTCGACAATGCTTTGCAGTCGGGAAATTCACAGGAAAGTGT TACGGAGCAGGATTCTAAAGATTCCACATATTCACTCAGCT CCACCCTTACACTGAGCAAAGCCGACTATGAAAAACATAA AGTTTACGCATGTGAGGTGACGCACCAAGGATTATCCAGTC CGGTCACAAAATCGTTTAACCGCGGTGAGTGT
1570	ATX-P-3452	LC Kappa nt	GATATTGTGATGACTCAGTCTCCACTCTCCCTGCCCGTCACC CCTGGAGAGCCGGCCTCCATCTCCTGCAGGTCTAGTCAGAT CCTCCTGCATACTAATGGATACAACTATTTGGATTGGTACC TGCAGAAGCCAGGGCAGTCTCCTCAGCTCCTGATCTATTTG GGTTCTTATCGGGCCTCCGGGGTCCCTGACAGGTTCAGTGG CAGTGGATCAGGCACAGATTTTACACTGAAAATCAGCAGA GTGGAGGCTGGGGATGTTGGGCTTTATTACTGCATGCAAGC TCTACAAACTCCGCTCACTTTCGGCGGAGGGACCAAGGTGG AGATCAAACGTACGGTAGCTGCCCCTTCAGTTTTTATCTTTC CGCCGTCTGACGAGCAGTTAAAATCCGGGACCGCTTCTGTA GTTTGCCTGCTGAATAATTTTTATCCGCGTGAGGCTAAAGT ACAATGGAAAGTCGACAATGCTTTGCAGTCGGGAAATTCA CAGGAAAGTGTTACGGAGCAGGATTCTAAAGATTCCACAT ATTCACTCAGCTCCACCCTTACACTGAGCAAAGCCGACTAT GAAAAACATAAAGTTTACGCATGTGAGGTGACGCACCAAG GATTATCCAGTCCGGTCACAAAATCGTTTAACCGCGGTGAG TGT
1571	ATX-P-3360	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1572	ATX-P-3362	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC

1573	ATX-P-3363	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1574	ATX-P-3365	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1575	ATX-P-3367	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1576	ATX-P-3369	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1577	ATX-P-3370	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1578	ATX-P-3371	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1579	ATX-P-3373	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1580	ATX-P-3375	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1581	ATX-P-3378	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC

1582	ATX-P-3382	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1583	ATX-P-3383	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1584	ATX-P-3384	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1585	ATX-P-3386	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1586	ATX-P-3387	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1587	ATX-P-3389	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1588	ATX-P-3391	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1589	ATX-P-3392	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1590	ATX-P-3395	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1591	ATX-P-3396	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC

			QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1592	ATX-P-3397	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1593	ATX-P-3405	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1594	ATX-P-3406	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1595	ATX-P-3407	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1596	ATX-P-3408	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1597	ATX-P-3410	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1598	ATX-P-3412	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1599	ATX-P-3413	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1600	ATX-P-3414	LC Kappa aa	DIQMTQSPSTLSASVGDSVTITCRASQNIITWLAWYQQKPGKA PNLLIYKASSLESGVPSRFSGSGSGTEFTLTISSLQPDDFATYYC QQYSSYSYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1601	ATX-P-3419	LC Kappa aa	AIQMTQSPSSLSASVGDRVTITCRASQGIRNDLGWYQQKPGK APKLLIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYY CLQDYNYPWTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTA SVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDS TYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1602	ATX-P-3421	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQTVLYRSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA

			EDVAVYYCQQYYSTPWTFGQGTKVEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1603	ATX-P-3428	LC Kappa aa	AIQMTQSPSSLSASVGDRVTITCRASQGIRNDLGWYQQNPGK APKLLIYAASNLQSGVPSRFSGSGSGTDFTLTISSLQPEDFVTY YCLQDYNWPWTFGQGTRLEIKRTVAAPSVFIFPPSDEQLKSGT ASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKD STYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGE C
1604	ATX-P-3430	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCRASQSISNYLNWYQQKPEKA PKFLIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYC QQSYSSPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1605	ATX-P-3431	LC Kappa aa	EIVLTQSPDFQSVTPKEKVTITCRASQSIGSNLHWFQQKPDQSP KLLIKYASQSFSGVPSRFSGSGSGTDFTLTINSLEAEDAAMYYC HQSSSLPRTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1606	ATX-P-3435	LC Kappa aa	AIQMTQSPSSLSASVGDRVTITCRASQGIRNDLGWYQQKPGK APKLLIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFASYY CLQDYNWPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTA SVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDS TYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1607	ATX-P-3436	LC Kappa aa	EIVLTQSPGTLSLSPGERATLSCRASQSVRSSYFAWYQQKPGQ APRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYY CQQYGSSPRTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1608	ATX-P-3437	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYFGTPRTFGQGTKVEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1609	ATX-P-3440	LC Kappa aa	EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQA PRLLIYDASNRATGIPARFSGSGSGTDFTLTISSLQSEDFAVYYC QQRSNWPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1610	ATX-P-3442	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCRASQTIRSYLNWYQQKPGKA PKLLIYAASSLQSGVPSRFSGSGSGTNFTLTISSLQPEDFATYSC QQSYTTPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1611	ATX-P-3444	LC Kappa aa	EIVLTQSPGTLSLSPGERATLSCRASQSISSSYLAWYQREPGQA PRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFVVYYC QQYGSSPITFGQGTRLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1612	ATX-P-3447	LC Kappa aa	EIVLTQSPGTLSLSPGERATLSCRASQSVRSSYLAWYQQKPGQ APRLLIYGASSRATGIPDRFSGSGSGTDFTLTFSRLEPEDFAVY YCQQYGSSPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTA

			SVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDS TYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1613	ATX-P-3448	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCQASQDISNYLNWYQQKPGKA PKLLIYDASNLETGVPSRFSGSGSGTDFTFTISSLQPEDFATYYC QQANSFPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1614	ATX-P-3449	LC Kappa aa	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQ APRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYY CQQYGSSPFTFGPGTKVDIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1615	ATX-P-3450	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPWTFGQGTRLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1616	ATX-P-3451	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCRASQDISNYLNWYQQKPGKA PKLLIYAASSLESGVPSRFSGSGSGTDFTLTISSLQPEDFATYYC QQSYSTPTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVV CLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSL SSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1617	ATX-P-3453	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYRSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYGTPRTFGQGTKVEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1618	ATX-P-3454	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCQASQDIKNCLNWYQQKPGK APKLLIYDASNLETGVPSRFSGSGSGTDFTFTISSLQPEDIATYY CQQFDNLPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1619	ATX-P-3455	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQTILYRSNIKNYLAWYQ QKPGQPPKLLISWASTRESGVPDRFSGSGSGTDFTLTISSLQAE DVAVYYCQQYYSTRTFGQGTKLEIKRTVAAPSVFIFPPSDEQL KSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQ DSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSF NRGEC
1620	ATX-P-3456	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPRTFGQGTKVEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1621	ATX-P-3458	LC Kappa aa	DIQMTQSPSTLSASVGDRVTITCRASQGISSWLAWYQQKPGK APKLLIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYY CQQANSFPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1622	ATX-P-3459	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPPTFGQGTKVEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT

			EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1623	ATX-P-3462	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPGKA PKLLIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYC QQSYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1624	ATX-P-3463	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQFYDTPRTFGQGTKVEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1625	ATX-P-3466	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCRASQGISNYLAWYQQKPGKV PKLLIYVASTLQSGVPSRFSGSGSGTDFTLTISSLQPEDVATYY CQNYISAPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1626	ATX-P-3467	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPWTFGQGTKVEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1627	ATX-P-3468	LC Kappa aa	EIVLTQSPGTLSLSPGERATLSCRASQSVSSSYLAWYQQKPGQ APRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYY CQQYGSSPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1628	ATX-P-3469	LC Kappa aa	DIQMTQSPSSLSASVGDRVNITCRASQGISNYLAWYQQKPGK VPKLLIYAASTLQSGVPSRFSGSGSGTDFTLTISSLQPEDVASYF CQKYISAPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1629	ATX-P-3470	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCRASQGISNYLAWYQQKPGKV PKLLIYAASTLQSGVPSRFSGSGSGTDFTLTISSLQPEDVASYY CQDYTSAPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1630	ATX-P-3471	LC Kappa aa	EIVLTQSPGTLSLSPGERATLSCRASQSVSDSYLAWYQQEPGQ APRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFALYY CQQYDSSPFTFGPGTKVDIKRTVAAPSVFIFPPSDEQLKSGTAS VVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDST YSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1631	ATX-P-3472	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1632	ATX-P-3361	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT

			EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1633	ATX-P-3366	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1634	ATX-P-3376	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1635	ATX-P-3377	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASNRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPYTFGQGTKLEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1636	ATX-P-3418	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCRASQTIRNFLNWYQRKPGKA PKILIYAASSLQSGVPSRFSGSGSGTDFTLTISSLQPADFATYYC QQTYSIPITFGQGTRLEIKRTVAAPSVFIFPPSDEQLKSGTASVV CLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSL SSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1637	ATX-P-3420	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCRASQSISRYLNWYQQKPGKA PKLLLYAASSLQSGVPSKFSGSGSGTDFTLTISSLQPEDFATYY CQQSYSSPITFGQGTRLEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1638	ATX-P-3426	LC Kappa aa	DIVMTQSPLSLPVTPGEPASISCRSSQSLLHSNGYNYLDWYLQ KPGQSPQLLIYLGSNRASGVPDRFSGSGSGTDFTLKISRVEAED VGVYYCMQTLQTPPTFGQGTKVEIKRTVAAPSVFIFPPSDEQL KSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQ DSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSF NRGEC
1639	ATX-P-3432	LC Kappa aa	DIQLTQSPSFLSASVGDRLTITCRASQGISSYLAWYQQKPGKAP KLLIYTASTLQSGVPSRFSGSGSGTEFTLTISSLQPEDFATYYCQ QLNGYPPTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVV CLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSL SSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1640	ATX-P-3433	LC Kappa aa	DIQMTQSPSSLSASVGDRVTITCRASQSITSYLNWYQQKPGKA PKLLIFAASSLQSGVPSRFSGSGSGTDFTLTISSLQPEDFATYYC QQSYSTPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASV VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1641	ATX-P-3438	LC Kappa aa	DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWY QQKPGQPPKLLIYWASTRESGVPDRFSGSGSGTDFTLTISSLQA EDVAVYYCQQYYSTPRTFGQGTKVEIKRTVAAPSVFIFPPSDE QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT KSFNRGEC
1642	ATX-P-3441	LC Kappa aa	DIQMTQSPSSLSASVGERVTITCRASQSISSYLNWYQQKPGKA PNLLIYAASSFQSGVPSRVSGSGSGTDFTLTISSLQPEDFATYYC QQSYSNPYTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASV

			VCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTY SLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1643	ATX-P-3446	LC Kappa aa	EIVLTQSPGTLSLSPGERATLSCRASQSVSRSYLAWYQQKPGQ APRLLIYGASSRATGIPDRFSGSGSGTDFTLTISRLEPEDFAVYY CQQYGSSPWTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTA SVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDS TYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
1644	ATX-P-3452	LC Kappa aa	DIVMTQSPLSLPVTPGEPASISCRSSQILLHTNGYNYLDWYLQK PGQSPQLLIYLGSYRASGVPDRFSGSGSGTDFTLKISRVEAGDV GLYYCMQALQTPLTFGGGTKVEIKRTVAAPSVFIFPPSDEQLK SGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQD SKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFN RGEC

[00218] Human Complement Component 3 (C3), which includes Complement Component 3a (C3a) and Complement Component 3b (C3b), was used to generate the anti-C3 antibodies of the present disclosure (see, e.g., UniProt Accession No. M0QYC8): ITHRIHWESASLLRSEETKENEGFTVTAEGKGQGTLSVVTMYHAKAKDQLT CNKFDLKVTIKPAPETGIPSPIFLSSVFLEKRPQDAKNTMILEICTRYRGDQDATMSILDIS MMTGFAPDTDDLKQLANGVDRYISKYELDKAFSDRNTLIIYLDKVSHSEDDCLAFKVH QYFNVELIQPGAVKVYAYYNL (SEQ ID NO: 1645).

[00219] Various embodiments of the present disclosure are described herein. Variations of those embodiments may become apparent to those of ordinary skill in the art upon reading the foregoing description. The inventors expect skilled artisans to employ such variations as appropriate, and the inventors intend for the various embodiments of the present disclosure to be practiced otherwise than as specifically described herein. Accordingly, embodiments of the present disclosure include all modifications and equivalents of the subject matter recited in the claims appended hereto as permitted by applicable law. Moreover, any combination of the above-described elements in all possible variations thereof is encompassed by the various embodiments of the present disclosure unless otherwise indicated herein or otherwise clearly contradicted by context.

CLAIMS

What is claimed is:

1. A bispecific antibody, or antigen binding fragment thereof, which specifically binds human Complement Factor H Related 4 (CFHR) and human Complement Component 3 (C3), optionally wherein said human CFHR4 is the CFHR4 b variant (CFHR4b), which is optionally a polypeptide comprising or consisting of the amino acid sequence of SEQ ID NO: 580, and optionally wherein said human C3 is the b variant of C3 (C3b), which is optionally a polypeptide comprising or consisting of the amino acid sequence of SEQ ID NO: 1645.

2. The bispecific antibody of fragment of claim 1, which is monoclonal, optionally recombinant.

3. The bispecific antibody or fragment according to any one of the preceding claims, which is human, humanized or chimeric.

4. The bispecific antibody or fragment according to any one of the preceding claims, which is a full length antibody, a single chain antibody, a single chain variable fragment (scFv), a variable fragment (Fv), a fragment antigen-binding region (Fab), a Fab-C, a Fab'-SH, a (Fab')2, a single-domain antibody (sdAb), a VHH antibody, a nanobody, a camelid-derived single-domain antibody, a shark IgNAR-derived single-domain antibody fragment (VNAR), a diabody, a triabody, an anticalin or an aptamer, optionally wherein the antibody is a full length antibody comprising an Fc region such as a human IgG1, IgG2, IgG3 or IgG4 region.

5. The bispecific antibody or fragment according to any one of the preceding claims, which is conjugated to at least one additional moiety, optionally selected from:

a. an antigen binding moiety, such as an antibody or antigen-binding fragment thereof, which is capable of specific binding to a target which is not human CFHR4 or human C3, preferably wherein said target is expressed in the human eye;
b. a therapeutic or cytotoxic moiety;
c. a detection moiety;

d. a purification moiety;
e. a half-life extension moiety, optionally a polypeptide that is at least 20 amino acids in length and comprises any combination of G, A, S T, E, and P residue, which polypeptide is conjugated to the C- or N- terminus of the antibody.

6. The bispecific antibody or fragment according to any one of the preceding claims, which is a polypeptide comprising:

a. one, two or all three HCDRs of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 3; and one, two or all three of the corresponding LCDRs of said exemplary antibody; and/or
b. a VH sequence having at least 90% identity to the VH sequence of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 4; and optionally a VL sequence having at least 90% identity to the corresponding VL sequence of said exemplary antibody, preferably wherein variation is not permitted in the HCDRs or LCDRs; and/or
c. all six CDRs of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 3;
d. the VH and VL sequences of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 4; and/or
e. the full length heavy chain (VH + constant) sequence of any one of the exemplary CFHR4 antibodies the sequences of which are provided in Table 5; and optionally the corresponding full length light chain (VL + constant) sequence of said exemplary antibody.

7. The bispecific antibody or fragment according to any one of the preceding claims, which is a polypeptide comprising:

a. one, two or all three HCDRs of any one of the exemplary C3 antibodies the sequences of which are provided in Table 6; and one, two or all three of the corresponding LCDRs of said exemplary antibody; and/or
b. a VH sequence having at least 90% identity to the VH sequence of any one of the exemplary C3 antibodies the sequences of which are provided in Table 7; and

optionally a VL sequence having at least 90% identity to the corresponding VL sequence of said exemplary antibody provided in Table 8, preferably wherein variation is not permitted in the HCDRs or LCDRs; and/or

c. all six CDRs of any one of the exemplary C3 antibodies the sequences of which are provided in Table 6;
d. the VH and VL sequences of any one of the exemplary C3 antibodies the sequences of which are provided in Tables 7 and 8; and/or
e. the full length heavy chain (VH + constant) sequence of any one of the exemplary C3 antibodies the sequences of which are provided in Table 9; and optionally the corresponding full length light chain (VL + constant) sequence of said exemplary antibody provided in Table 10.

8. A polynucleotide encoding an antibody or fragment according to any one of the preceding claims, optionally wherein said polynucleotide comprises or consists of a nucleic acid sequence having at least 70, 80, 90 or 100% identity to a nucleic acid sequence of any one of the exemplary antibodies the sequences of which are provided in Tables 5, 9, and 10.

9. An expression vector comprising the polynucleotide of claim 8, which is optionally an adeno-associated virus (AAV) vector, a lentiviral (LV) vector, a herpes simplex virus (HSV) vector, or a retrovirus vector.

10. A pharmaceutical composition comprising an antibody or fragment, a polynucleotide, or a vector according to any one of the preceding claims, and optionally

a. at least one pharmaceutically acceptable carrier, diluent or preservative; and/or
b. at least one additional active ingredient.

11. The pharmaceutical composition of claim 10, which is suitable for ocular administration to a subject, optionally by delivery using a conjunctival insert, a contact lens, a gel, a nanoparticle, a mucoadhesive polymer, an ointment, a solution, a suspension, eye drops, and/or an implant, preferably by injection into the vitreous fluid.

12. The antibody or fragment according to any one of claims 1 to 7, the polynucleotide of claim 8, the vector of claim 9, or the composition of claim 10 or 11, for use as a medicament, optionally for use in a method of treating a disease of the eye in a subject.

13. The antibody, fragment, polynucleotide, vector or composition for use according to claim 12, wherein said disease is characterized by increased activation of the complement system, in particular the alternative pathway, and in particular within the eye of the subject, for example in drusen or retinal pigment epithelium (RPE) cells of the subject.

14. The antibody, fragment, polynucleotide, vector or composition for use according to claim 12 or 13, wherein the method comprises ocular administration of the antibody, preferably by injection into the vitreous fluid, and wherein said administration preferably relieves at least one symptom in the subject selected from visual distortion, reduced central vision, blurred vision, and/or difficulty adapting to low light.

15. The antibody, fragment, polynucleotide, vector or composition for use according to any one of claims 12 to 14, where the disease is age-related macular degeneration (AMD), optionally wherein said AMD is dry AMD, which may be at an early, intermediate or advanced stage (the latter otherwise known as geographic atrophy, GA).

16. A bispecific antibody comprising a first antigen-binding site directed against Complement Factor H Related 4 (CFHR4) and a second antigen-binding site directed against Complement Component 3 (C3):

wherein the first anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406; and

wherein the second anti-C3 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3;

and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3.

17. A bispecific antibody comprising a first antigen-binding site directed against Complement Factor H Related 4 (CFHR4) and a second antigen-binding site directed against Complement Component 3 (C3):

wherein the first anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3; and

wherein the second anti-C3 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 1127-1200; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 1275-1348.

18. A bispecific antibody comprising a first antigen-binding site directed against Complement Factor H Related 4 (CFHR4) and a second antigen-binding site directed against Complement Component 3 (C3):

wherein the first anti-CFHR4 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406; and

wherein the second anti-C3 antigen-binding site comprises a heavy chain variable region (VH) comprising complementarity determining regions (CDRs) HCDR1, HCDR2, and HCDR3 from at least one of SEQ ID NOs: 1127-1200; and a light chain variable region (VL) comprising complementarity determining regions (CDRs) LCDR1, LCDR2, and LCDR3 from at least one of SEQ ID NOs: 1275-1348.

19. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 2; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 9; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 15.

20. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 3; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 10; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 16.

21. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 4; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 11; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 17.

22. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 5; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 12; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 18.

23. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 6; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 13; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 19.

24. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 7; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 14; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 20.

25. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 22; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 33; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 43.

26. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 23; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 34; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 44.

27. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 24; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 35; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 45.

28. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 25; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 36; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 46.

29. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 26; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 37; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 47.

30. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 27; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 38; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 48.

31. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 28; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 39; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 49.

32. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 29; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 40; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 50.

33. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 30; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 41; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 51.

34. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 31; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 42; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 52.

35. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 54; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 66; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 77.

36. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 55; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 67; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 78.

37. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 56; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 68; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 79.

38. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 57; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 69; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 80.

39. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 58; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 70; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 81.

40. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 59; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 71; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 82.

41. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 60; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 72; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 83.

42. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 61; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 73; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 84.

43. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 62; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 74; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 85.

44. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 63; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 75; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 86.

45. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 64; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 76; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 87.

46. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 89; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 103; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 116.

47. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 90; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 104; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 117.

48. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 91; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 105; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 118.

49. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 92; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 106; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 119.

50. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 93; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 107; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 120.

51. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 94; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 108; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 121.

52. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 95; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 109; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 122.

53. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 96; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 110; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 123.

54. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 97; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 111; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 124.

55. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 98; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 112; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 125.

56. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 99; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 113; and the HCDR3 comprises the amino acid sequence of SEQ ID NO: 126.

57. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 100; the HCDR2 comprises the amino acid sequence of SEQ ID NO: 114; and the HCDR3 comprises the amino acid sequence of SEQ ID NO: 127.

58. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 HCDR1 comprises the amino acid sequence of SEQ ID NO: 101; the anti-CFHR4 HCDR2 comprises the amino acid sequence of SEQ ID NO: 115; and the anti-CFHR4 HCDR3 comprises the amino acid sequence of SEQ ID NO: 128.

59. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 130; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 153; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 175.

60. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 131; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 154; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 176.

61. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 132; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 155; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 177.

62. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 133; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 156; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 178.

63. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 134; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 157; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 179.

64. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 135; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 158; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 180.

65. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 136; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 159; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 181.

66. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 137; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 160; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 182.

67. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 138; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 161; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 183.

68. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 139; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 162; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 184.

69. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 140; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 163; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 185.

70. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 141; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 164; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 186.

71. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 142; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 165; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 187.

72. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 143; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 166; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 188.

73. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 144; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 167; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 189.

74. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 145; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 168; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 190.

75. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 146; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 169; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 191.

76. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 147; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 170; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 192.

77. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 148; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 171; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 193.

78. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 149; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 172; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 194.

79. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 150; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 173; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 195.

80. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 151; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 174; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 196.

81. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 198; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 201; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 204.

82. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 199; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 202; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 205.

83. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 207; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 217; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 227.

84. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 208; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 218; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 228.

85. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 209; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 219; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 229.

86. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 210; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 220; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 230.

87. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 211; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 221; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 231.

88. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 212; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 222; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 232.

89. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 213; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 223; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 233.

90. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 214; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 224; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 234.

91. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 215; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 225; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 235.

92. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 237; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 245; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 253.

93. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 238; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 246; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 254.

94. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 239; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 247; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 255.

95. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 240; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 248; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 256.

96. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 241; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 249; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 257.

97. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 242; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 250; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 258.

98. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 LCDR1 comprises the amino acid sequence of SEQ ID NO: 243; the anti-CFHR4 LCDR2 comprises the amino acid sequence of SEQ ID NO: 251; and the anti-CFHR4 LCDR3 comprises the amino acid sequence of SEQ ID NO: 259.

99. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 583; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 602; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 620.

100. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 584; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 603; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 621.

101. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 585; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 604; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 622.

102. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 586; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 605; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 623.

103. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 587; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 606; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 624.

104. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 588; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 607; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 625.

105. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 589; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 608; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 626.

106. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 590; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 609; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 627.

107. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 591; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 610; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 628.

108. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 592; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 611; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 629.

109. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 593; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 612; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 630.

110. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 594; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 613; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 631.

111. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 595; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 614; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 632.

112. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 596; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 615; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 633.

113. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 597; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 616; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 634.

114. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 598; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 617; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 635.

115. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 599; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 618; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 636.

116. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 600; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 619; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 637.

117. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 639; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 652; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 664.

118. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 640; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 653; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 665.

119. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 641; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 654; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 666.

120. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 642; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 655; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 667.

121. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 643; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 656; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 668.

122. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 644; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 657; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 669.

123. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 645; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 658; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 670.

124. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 646; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 659; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 671.

125. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 647; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 660; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 672.

126. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 648; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 661; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 673.

127. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 649; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 662; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 674.

128. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 650; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 663; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 675.

129. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 677; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 706; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 734.

130. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 678; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 707; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 735.

131. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 679; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 708; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 736.

132. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 680; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 709; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 737.

133. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 681; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 710; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 738.

134. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 682; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 711; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 739.

135. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 683; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 712; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 740.

136. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 684; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 713; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 741.

137. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 685; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 714; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 742.

138. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 686; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 715; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 743.

139. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 687; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 716; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 744.

140. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 688; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 717; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 745.

141. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 689; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 718; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 746.

142. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 690; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 719; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 747.

143. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 691; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 720; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 748.

144. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 692; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 721; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 749.

145. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 693; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 722; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 750.

146. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 694; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 723; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 751.

147. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 695; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 724; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 752.

148. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 696; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 725; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 753.

149. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 697; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 726; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 754.

150. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 698; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 727; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 755.

151. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 699; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 728; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 756.

152. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 700; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 729; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 757.

153. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 701; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 730; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 758.

154. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 702; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 731; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 759.

155. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 703; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 732; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 760.

156. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 704; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 733; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 761.

157. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 763; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 771; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 778.

158. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 764; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 772; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 779.

159. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 765; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 773; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 780.

160. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 766; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 774; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 781.

161. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 767; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 775; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 782.

162. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 768; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 776; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 783.

163. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 769; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 777; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 784.

164. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 786; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 794; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 801.

165. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 787; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 795; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 802.

166. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 788; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 796; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 803.

167. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 789; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 797; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 804.

168. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 790; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 798; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 805.

169. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 791; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 799; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 806.

170. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 792; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 800; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 807.

171. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 809; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 812; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 815.

172. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 HCDR1 comprises the amino acid sequence of SEQ ID NO: 810; the anti-C3 HCDR2 comprises the amino acid sequence of SEQ ID NO: 813; and the anti-C3 HCDR3 comprises the amino acid sequence of SEQ ID NO: 816.

173. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 818; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 850; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 881.

174. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 819; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 851; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 882.

175. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 820; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 852; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 883.

176. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 821; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 853; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 884.

177. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 822; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 854; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 885.

178. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 823; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 855; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 886.

179. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 824; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 856; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 887.

180. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 825; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 857; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 888.

181. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 826; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 858; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 889.

182. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 827; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 859; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 890.

183. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 828; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 860; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 891.

184. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 829; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 861; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 892.

185. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 830; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 862; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 893.

186. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 831; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 863; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 894.

187. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 832; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 864; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 895.

188. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 833; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 865; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 896.

189. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 834; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 866; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 897.

190. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 835; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 867; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 898.

191. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 836; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 868; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 899.

192. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 837; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 869; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 900.

193. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 838; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 870; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 901.

194. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 839; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 871; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 902.

195. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 840; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 872; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 903.

196. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 841; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 873; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 904.

197. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 842; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 874; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 905.

198. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 843; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 875; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 906.

199. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 844; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 876; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 907.

200. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 845; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 877; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 908.

201. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 846; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 878; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 909.

202. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 847; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 879; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 910.

203. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 848; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 880; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 911.

204. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 913; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 916; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 919.

205. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 914; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 917; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 920.

206. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 914; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 917; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 920.

207. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 922; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 931; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 940.

208. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 923; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 932; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 941.

209. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 924; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 933; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 942.

210. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 925; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 934; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 943.

211. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 926; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 935; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 944.

212. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 927; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 936; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 945.

213. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 928; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 937; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 946.

214. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 929; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 938; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 947.

215. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 949; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 984; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1019.

216. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 950; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 985; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1020.

217. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 951; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 986; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1021.

218. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 952; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 987; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1022.

219. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 953; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 988; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1023.

220. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 954; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 989; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1024.

221. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 955; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 990; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1025.

222. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 956; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 991; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1026.

223. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 957; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 992; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1027.

224. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 958; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 993; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1028.

225. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 959; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 994; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1029.

226. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 960; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 995; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1030.

227. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 961; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 996; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1031.

228. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 962; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 997; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1032.

229. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 963; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 998; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1033.

230. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 964; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 999; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1034.

231. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 965; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1000; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1035.

232. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 966; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1001; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1036.

233. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 967; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1002; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1037.

234. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 968; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1003; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1038.

235. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 969; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1004; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1039.

236. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 970; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1005; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1040.

237. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 971; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1006; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1041.

238. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 972; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1007; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1042.

239. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 973; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1008; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1043.

240. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 974; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1009; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1044.

241. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 975; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1010; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1045.

242. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 976; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1011; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1046.

243. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 977; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1012; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1047.

244. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 978; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1013; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1048.

245. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 979; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1014; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1049.

246. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 980; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1015; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1050.

247. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 981; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1016; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1051.

248. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 LCDR1 comprises the amino acid sequence of SEQ ID NO: 982; the anti-C3 LCDR2 comprises the amino acid sequence of SEQ ID NO: 1017; and the anti-C3 LCDR3 comprises the amino acid sequence of SEQ ID NO: 1052.

249. The bispecific antibody of any one of claims 16 to 18, wherein the anti-CFHR4 VH comprises an amino acid sequence having at least 90% sequence identity to at least one of SEQ ID NOs: 260-265, 284-293, 324-334, and 368-380; and wherein the anti-CFHR4 VL comprises an amino acid sequence having at least 90% sequence identity to at least one of SEQ ID NOs: 272-277, 304-313, 346-356, and 394-406.

250. The bispecific antibody of any one of claims 16 to 18, wherein the anti-C3 VH comprises an amino acid sequence having at least 90% sequence identity to at least one of SEQ ID NOs: 1127-1200; and wherein the anti-C3 VL comprises an amino acid sequence having at least 90% sequence identity to at least one of SEQ ID NOs: 1275-1348.

251. The bispecific antibody of any one of claims 1 to 250, wherein the antibody binds CFHR4 and/or C3 and reduces complement activation.

252. The bispecific antibody of claim 251, wherein the antibody binds CFHR4b and/or C3b and reduces complement activation.

253. The bispecific antibody of any one of claims 1 to 252, wherein the antibody binds human CFHR4 and/or C3 with a K_D of about 100 nM or lower.

254. The bispecific antibody of any one of claims 1 to 253, wherein the antibody comprises a half-life extension moiety.

255. The bispecific antibody of claim 254, wherein the half-life extension moiety comprises a polypeptide that is at least 20 amino acids in length and comprises any combination of G, A, S T, E, and P residues.

256. The antibody of claim 255, wherein the half-life extension polypeptide is attached to the C-terminus or N-terminus of the antibody.

257. A pharmaceutical composition comprising any of the antibodies of claims 1 to 256.

258. The composition of claim 257, wherein the composition is suitable for ocular administration.

259. The composition of claim 258, wherein the ocular administration comprises injection into vitreous fluid.

260. The composition of claim 258, wherein the ocular administration comprises delivering the antibody using a conjunctival insert, a contact lens, a gel, a nanoparticle, a mucoadhesive polymer, an ointment, a solution, a suspension, eye drops, and/or an implant.

261. A method of treating age-related macular degeneration (AMD) comprising administering a pharmaceutical composition comprising an effective amount of the antibody of any one of claims 1 to 256 to a subject in need thereof.

262. The method of claim 261, wherein the pharmaceutical composition is administered ocularly and treats at least one AMD symptom.

263. The method of claim 261, wherein AMD comprises wet AMD.

264. The method of claim 261, wherein AMD comprises dry AMD.

265. The method of any one of claims 261 to 264, wherein the at least one AMD symptom comprises visual distortion, reduced central vision, blurred vision, and/or difficulty adapting to low light.

266. The method of any one of claims 261 to 265, wherein administering the pharmaceutical composition reduces complement activation in the subject's eye.

267. The method of any one of claims 261 to 266, wherein the pharmaceutical composition is administered at a dose ranging from about 0.0001 mg/dose to about 100 mg/dose.

268. The method of any one of claims 261 to 266, wherein the pharmaceutical composition is administered at a dose ranging from about 0.0001 mg/ml to about 100 mg/ml.

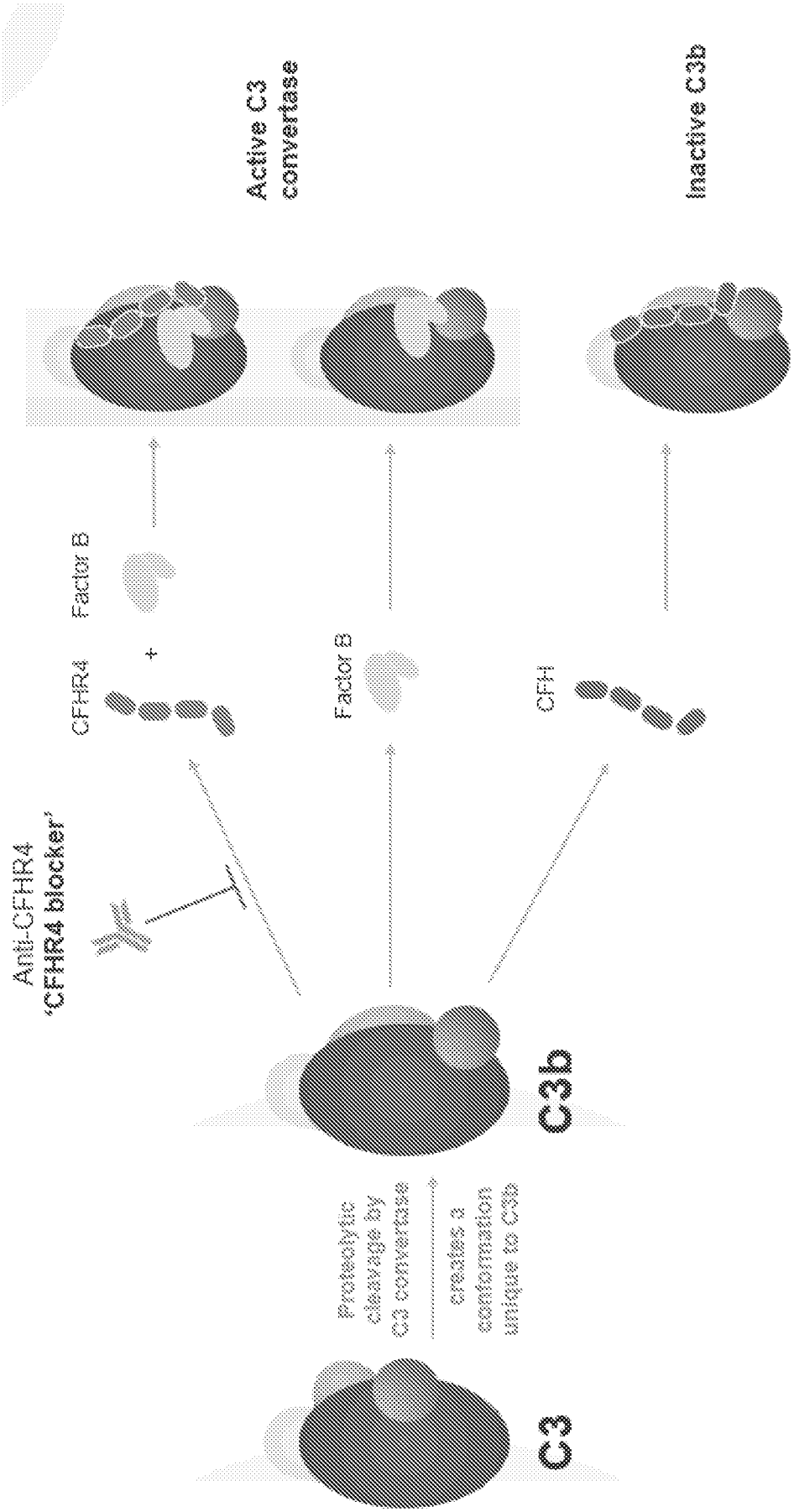

Active C3 convertase
Inactive C3b
Factor B
CFHR4
+
Factor B
CFH
Anti-CFHR4 'CFHR4 blocker'
C3b
Proteolytic cleavage by C3 convertase
creates a conformation unique to C3b
C3

FIG. 1

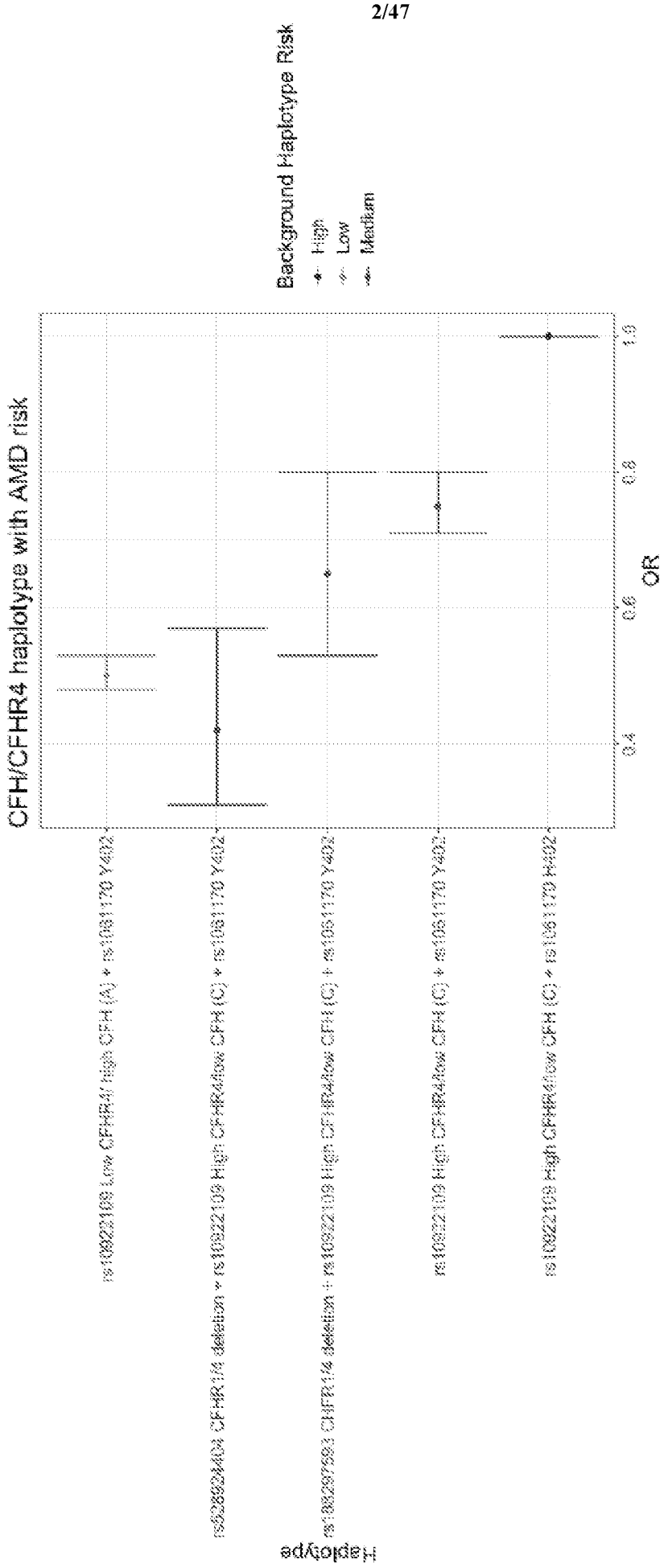
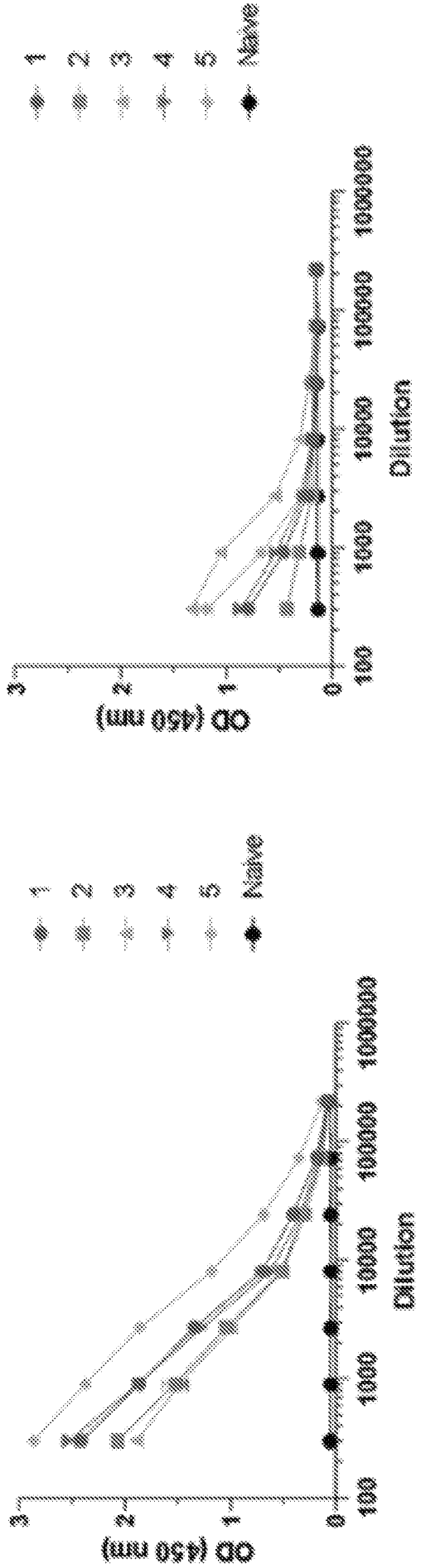

CFH/CFHR4 haplotype with AMD risk
Background Haplotype Risk
High
Low
Medium
OR
0.4
0.6
0.8
1.0
Haplotype
rs10922109 Low CFHR4/ High CFH (A) + rs1061170 Y402
rs6828024A3 CFHR1/4 deletion + rs10922109 High CFHR4/low CFH (C) + rs1061170 Y402
rs35297593 CHFR1/4 deletion + rs10922109 High CFHR4/low CFH (C) + rs1061170 Y402
rs10922109 High CFHR4/low CFH (C) + rs1061170 Y402
rs10922109 High CFHR4/low CFH (C) + rs1061170 H402

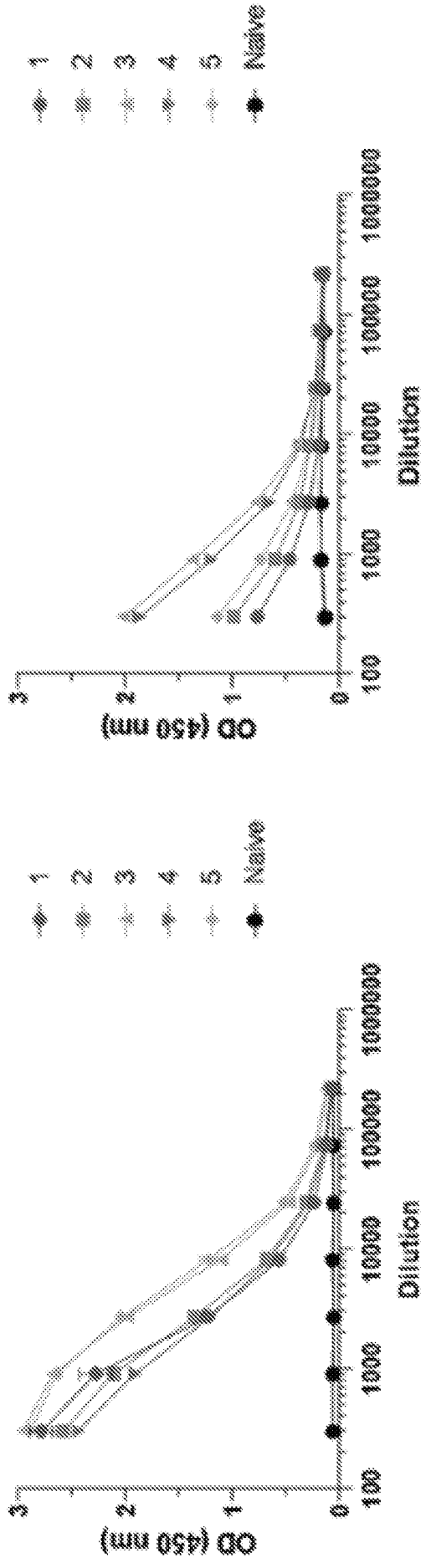
FIG. 2

FIG. 3A:



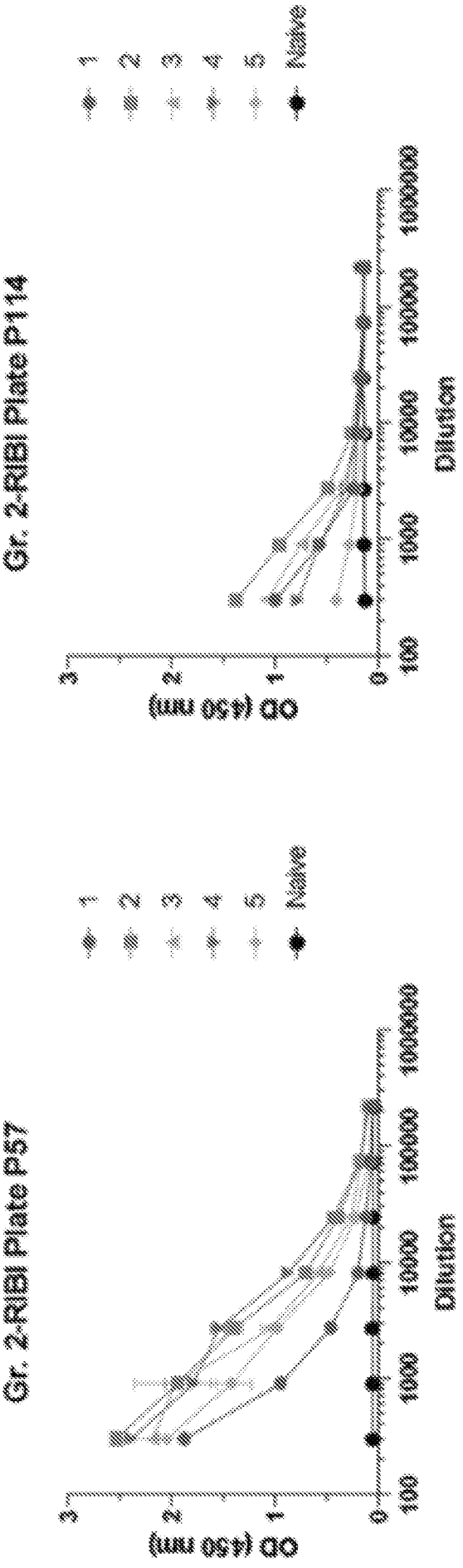
FIGS. 3A-3C

FIG. 3B:



FIGS. 3A-3C (cont'd)

FIG. 3C:



FIGS. 3A-3C (cont'd)

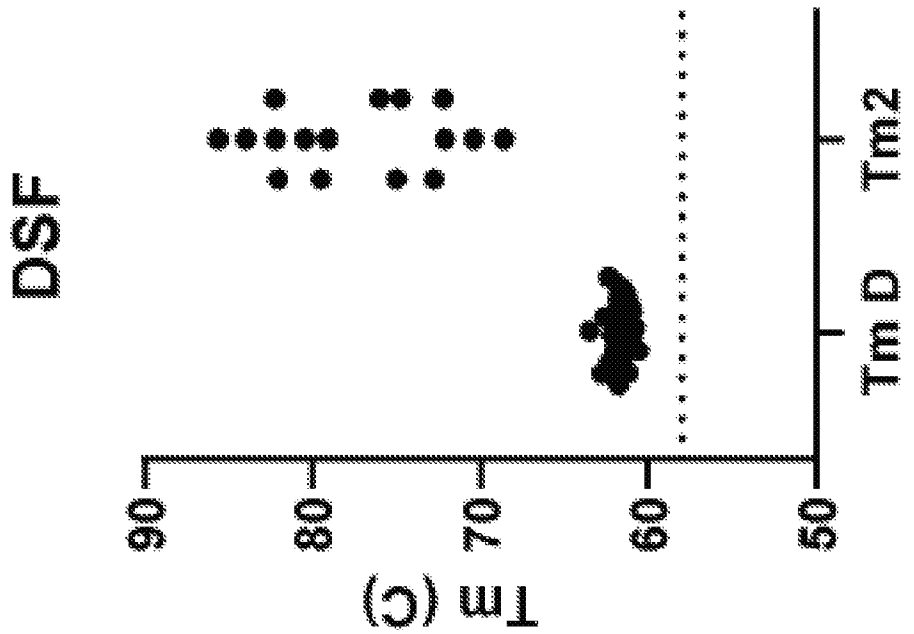
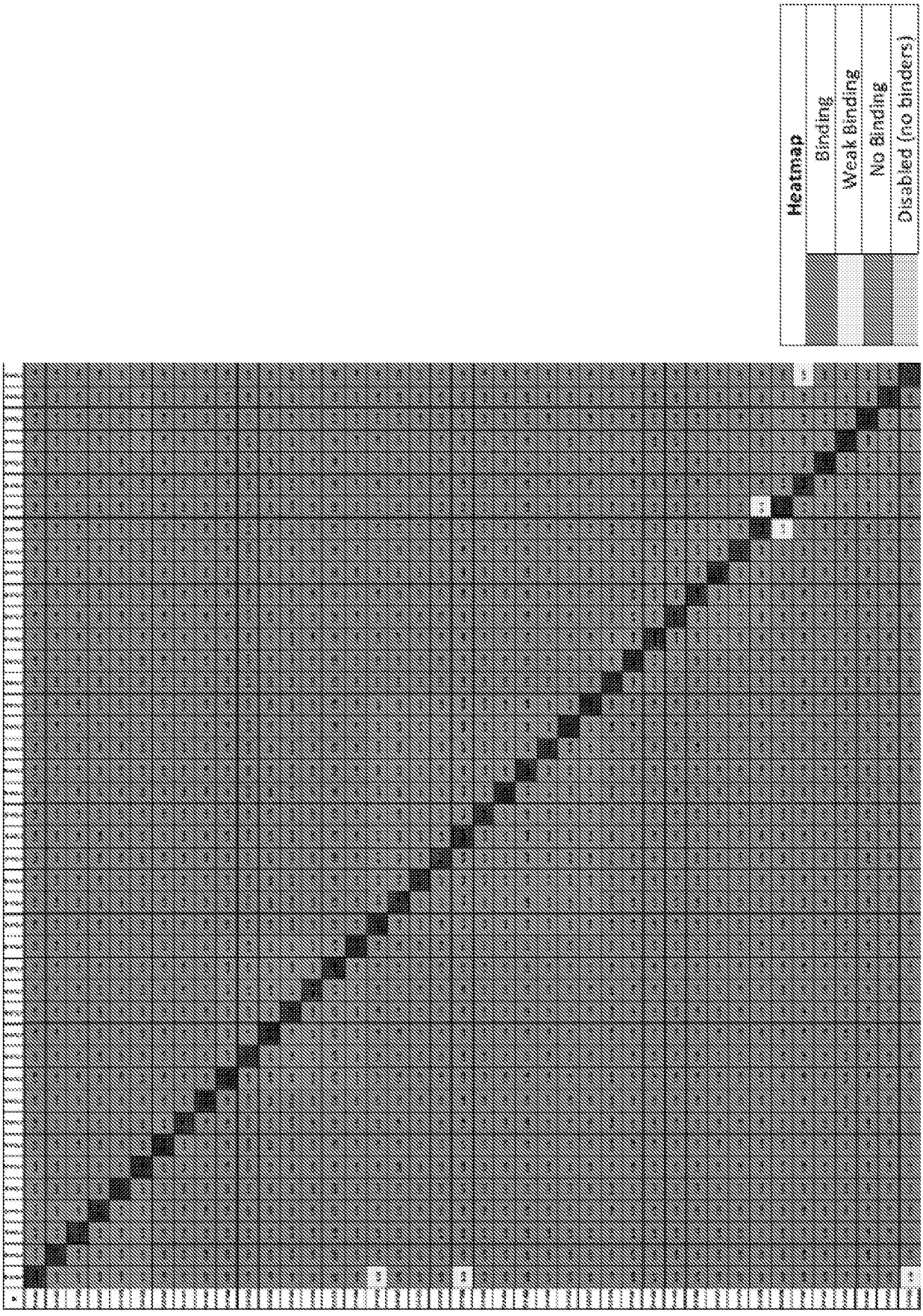


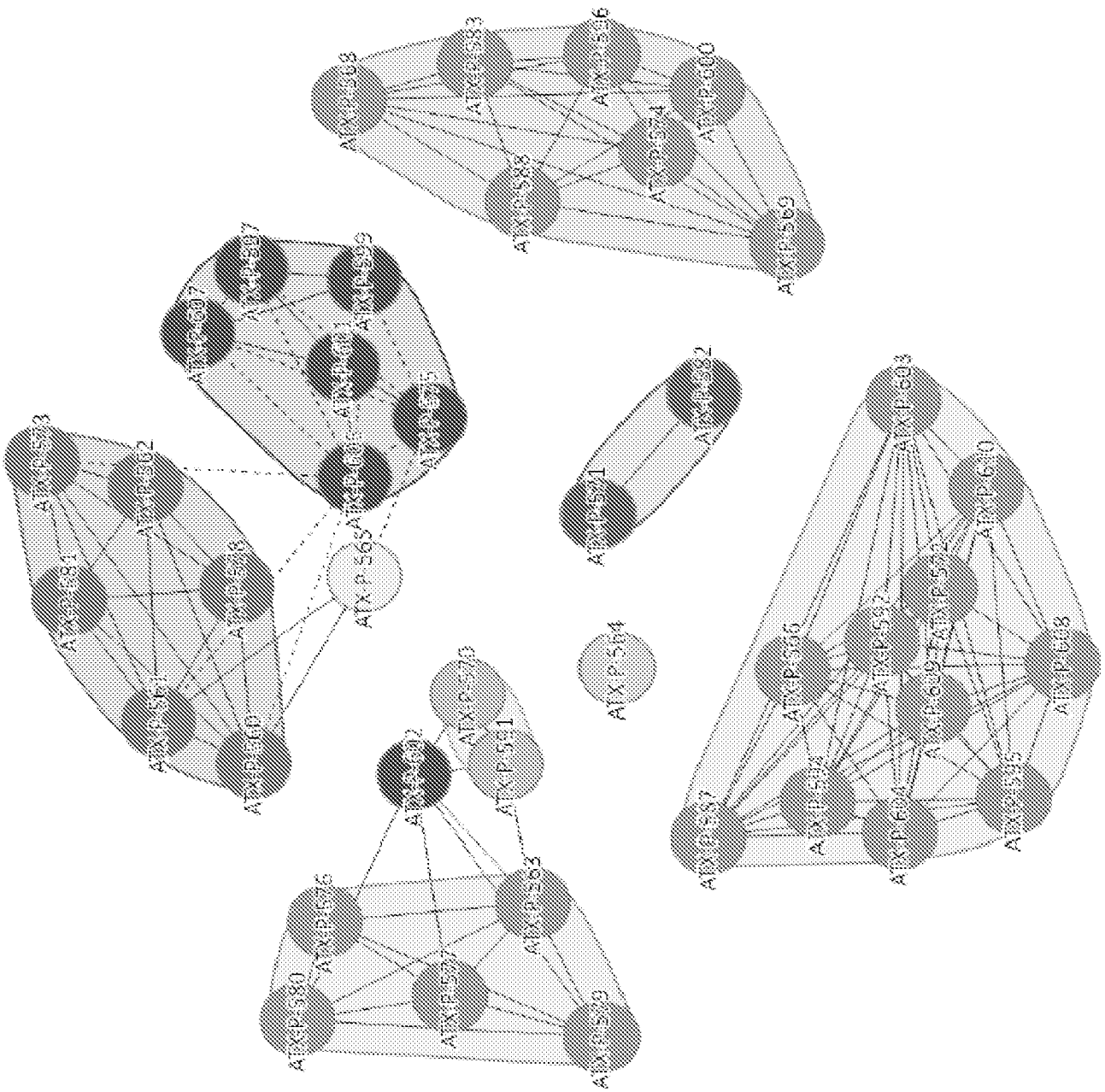
FIG. 4

FIG. 5A:



FIGS. 5A-5B

FIG. 5B:



FIGS. 5A-5B (cont'd)

FIG. 6:

hCFHR4 kinetics						
Antibody	k_a (M-1 s-1)	k_d (s-1)	K_D (M)	Rmax (RU)	Res SD	Res SD/Rmax (%)
ATX-P-560	3.53E+04	7.49E-05	2.12E-09	217.00	2.43	1.12
ATX-P-561	3.71E+04	1.18E-03	3.19E-08	147.78	2.22	1.50
ATX-P-562	1.89E+05	9.18E-05	4.87E-10	230.61	2.15	0.93
ATX-P-563	3.07E+05	3.22E-04	1.05E-09	230.96	5.10	2.21
ATX-P-564	1.63E+05	5.81E-04	3.56E-09	340.31	8.00	2.35
ATX-P-565	4.63E+04	3.19E-04	6.90E-09	231.30	2.41	1.04
ATX-P-566	1.55E+05	5.39E-04	3.48E-09	355.64	8.54	2.40
ATX-P-568	2.23E+05	3.60E-04	1.62E-09	364.47	6.21	1.70
ATX-P-569	6.34E+04	9.11E-05	1.44E-09	321.09	4.03	1.26
ATX-P-570	6.66E+04	6.97E-04	1.05E-08	310.44	5.48	1.77
ATX-P-571	8.72E+04	2.39E-03	2.74E-08	170.18	4.07	2.39
ATX-P-572	1.09E+05	1.64E-04	1.50E-09	380.13	6.41	1.69
ATX-P-573	2.33E+04	5.35E-04	2.30E-08	224.21	1.31	0.58
ATX-P-574	3.37E+05	1.99E-03	5.90E-09	359.75	8.76	2.43
ATX-P-575	1.06E+05	5.05E-04	4.77E-09	318.68	3.93	1.23
ATX-P-576	3.23E+05	2.91E-04	9.00E-10	273.01	4.74	1.74
ATX-P-577	1.60E+05	1.06E-04	6.65E-10	242.97	3.73	1.53
ATX-P-578	2.67E+05	6.68E-03	2.50E-08	193.30	9.90	5.12
ATX-P-579	1.37E+05	2.00E-04	1.46E-09	309.66	7.23	2.34
ATX-P-580	1.76E+05	5.63E-03	3.19E-08	156.14	4.23	2.71
ATX-P-581	6.88E+04	6.65E-04	9.65E-09	253.05	2.52	1.00
ATX-P-582	1.12E+05	1.12E-03	1.00E-08	212.43	4.50	2.12
ATX-P-583	1.66E+05	5.27E-05	3.17E-10	442.14	5.44	1.23
ATX-P-587	6.72E+04	2.86E-04	4.26E-09	335.51	5.97	1.78
ATX-P-588	1.82E+05	1.25E-03	6.87E-09	398.49	8.61	2.16
ATX-P-591	3.07E+04	3.59E-03	1.17E-07	220.78	6.97	3.16
ATX-P-592	2.07E+05	2.01E-04	9.73E-10	486.28	8.92	1.83
ATX-P-594	1.10E+05	3.57E-05	3.26E-10	421.93	11.06	2.62
ATX-P-595	1.53E+05	2.58E-03	1.69E-08	251.35	9.85	3.92
ATX-P-596	1.88E+05	4.22E-05	2.25E-10	293.05	5.21	1.78
ATX-P-597	2.00E+05	3.37E-05	1.68E-10	361.85	4.10	1.13
ATX-P-598	NB	NB	NB	NB	NB	NB
ATX-P-599	1.21E+05	5.02E-04	4.14E-09	330.80	4.99	1.51
ATX-P-600	1.04E+05	7.68E-04	7.39E-09	377.62	5.80	1.54
ATX-P-601	2.15E+05	3.91E-03	1.82E-08	227.56	8.48	3.73
ATX-P-602	1.25E+05	4.14E-03	3.30E-08	224.80	5.77	2.57
ATX-P-603	2.60E+05	2.38E-04	9.17E-10	410.51	10.41	2.54
ATX-P-604	1.11E+05	2.47E-05	2.22E-10	477.63	13.43	2.81
ATX-P-605	1.22E+05	6.09E-05	5.00E-10	384.59	3.99	1.04
ATX-P-607	1.12E+05	8.96E-04	7.97E-09	347.14	5.41	1.56
ATX-P-608	2.86E+05	9.93E-05	3.47E-10	363.90	9.29	2.55
ATX-P-609	6.90E+04	3.44E-04	4.98E-09	400.83	3.53	0.88

FIG. 7:

cCFHR4B		
Antibody	Response @1.6E-7M	Cross-reactivity
ATX-P-560	127.50	Yes
ATX-P-561	330.50	Yes
ATX-P-562	283.40	Yes
ATX-P-563	354.17	Yes
ATX-P-564	312.28	Yes
ATX-P-565	192.80	Yes
ATX-P-566	258.53	Yes
ATX-P-568	304.22	Yes
ATX-P-569	128.57	Yes
ATX-P-570	139.80	Yes
ATX-P-571	339.94	Yes
ATX-P-572	19.10	No
ATX-P-573	347.57	Yes
ATX-P-574	387.89	Yes
ATX-P-575	27.76	No
ATX-P-576	392.14	Yes
ATX-P-577	410.28	Yes
ATX-P-578	409.83	Yes
ATX-P-579	379.69	Yes
ATX-P-580	313.21	Yes
ATX-P-581	323.92	Yes
ATX-P-582	340.60	Yes

cCFHR4B		
Antibody	Response @1.6E-7M	Cross-reactivity
ATX-P-583	168.58	Yes
ATX-P-587	203.85	Yes
ATX-P-588	471.84	Yes
ATX-P-591	229.96	Yes
ATX-P-592	159.25	Yes
ATX-P-594	370.83	Yes
ATX-P-595	40.94	No
ATX-P-596	215.57	Yes
ATX-P-597	-2.60	No
ATX-P-598	9.08	No
ATX-P-599	-24.10	No
ATX-P-600	445.30	Yes
ATX-P-601	-4.50	No
ATX-P-602	-9.06	No
ATX-P-603	-7.27	No
ATX-P-604	301.51	Yes
ATX-P-605	46.07	No
ATX-P-607	-7.03	No
ATX-P-608	-41.39	No
ATX-P-609	-9.59	No
ATX-P-610	-3.17	No

FIG. 8:

hCHFR4a		
Antibody	Response @5.4E-7M	Cross-reactivity
ATX-P-560	68.80	Yes
ATX-P-561	226.14	Yes
ATX-P-562	265.08	Yes
ATX-P-563	253.28	Yes
ATX-P 564	352.34	Yes
ATX-P-565	190.05	Yes
ATX-P-566	321.44	Yes
ATX-P-568	339.59	Yes
ATX-P-569	108.27	Yes
ATX-P-570	232.55	Yes
ATX-P-571	145.02	Yes
ATX-P-572	333.23	Yes
ATX-P-573	261.18	Yes
ATX-P-574	282.10	Yes
ATX-P-575	230.85	Yes
ATX-P-576	282.13	Yes
ATX-P-577	327.29	Yes
ATX-P-578	228.95	Yes
ATX-P-579	282.63	Yes
ATX-P-580	210.49	Yes
ATX-P-581	270.87	Yes
ATX-P-582	199.93	Yes

hCHFR4a		
Antibody	Response @5.4E-7M	Cross-reactivity
ATX-P-583	149.73	Yes
ATX-P-587	256.75	Yes
ATX-P-588	416.79	Yes
ATX-P-591	208.26	Yes
ATX-P-592	442.86	Yes
ATX-P-594	362.72	Yes
ATX-P-595	236.71	Yes
ATX-P-596	183.66	Yes
ATX-P-597	335.18	Yes
ATX-P-598	-0.39	No
ATX-P-599	242.95	Yes
ATX-P-600	394.61	Yes
ATX-P-601	303.35	Yes
ATX-P-602	237.00	Yes
ATX-P-603	345.94	Yes
ATX-P-604	300.55	Yes
ATX-P-605	123.09	Yes
ATX-P-607	330.86	Yes
ATX-P-608	286.47	Yes
ATX-P-609	352.74	Yes
ATX-P-610	181.47	Yes

FIG. 9:

hCFHR3		
Antibody	Response @5.5E-7M	Cross-reactivity
ATX-P-560	7.58	No
ATX-P-561	135.94	Yes
ATX-P-562	183.80	Yes
ATX-P-563	254.70	Yes
ATX-P-564	177.77	Yes
ATX-P-565	88.77	Yes
ATX-P-566	275.66	Yes
ATX-P-568	319.77	Yes
ATX-P-569	89.95	Yes
ATX-P-570	9.12	No
ATX-P-571	-3.83	No
ATX-P-572	243.64	Yes
ATX-P-573	55.91	Yes
ATX-P-574	272.48	Yes
ATX-P-575	11.10	No
ATX-P-576	335.75	Yes
ATX-P-577	348.75	Yes
ATX-P-578	237.25	Yes
ATX-P-579	289.13	Yes
ATX-P-580	216.29	Yes
ATX-P-581	84.77	Yes
ATX-P-582	3.09	No

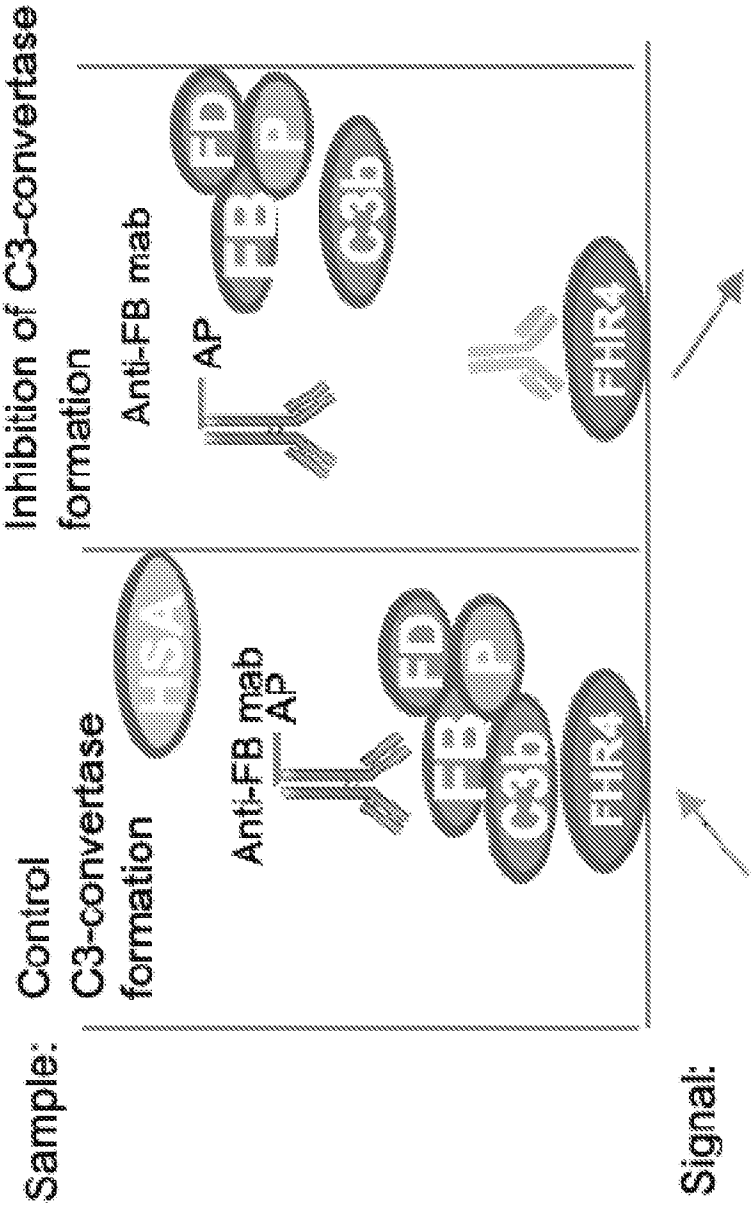
hCFHR3		
Antibody	Response @5.5E-7M	Cross-reactivity
ATX-P-583	160.62	Yes
ATX-P-587	210.21	Yes
ATX-P-588	425.72	Yes
ATX-P-591	2.17	No
ATX-P-592	337.99	Yes
ATX-P-594	300.26	Yes
ATX-P-595	92.28	Yes
ATX-P-596	177.36	Yes
ATX-P-597	6.91	No
ATX-P-598	7.90	No
ATX-P-599	0.37	No
ATX-P-600	424.01	Yes
ATX-P-601	-1.91	No
ATX-P-602	-7.09	No
ATX-P-603	337.64	Yes
ATX-P-604	253.23	Yes
ATX-P-605	12.37	No
ATX-P-607	6.55	No
ATX-P-608	285.03	Yes
ATX-P-609	320.00	Yes
ATX-P-610	71.76	Yes

FIG. 10:

hCFHL1-Y402H		
Antibody	Response @3.8E-7M	Cross-reactivity
ATX-P-560	27.07	No
ATX-P-561	76.20	Yes
ATX-P-562	235.03	Yes
ATX-P-563	253.08	Yes
ATX-P-564	113.27	Yes
ATX-P-565	109.75	Yes
ATX-P-566	122.95	Yes
ATX-P-568	328.39	Yes
ATX-P-569	35.67	No
ATX-P-570	202.96	Yes
ATX-P-571	269.23	Yes
ATX-P-572	-0.91	No
ATX-P-573	63.37	Weak
ATX-P-574	348.42	Yes
ATX-P-575	28.63	No
ATX-P-576	302.74	Yes
ATX-P-577	229.58	Yes
ATX-P-578	345.21	Yes
ATX-P-579	244.87	Yes
ATX-P-580	196.15	Yes
ATX-P-581	175.05	Yes
ATX-P-582	319.33	Yes

hCFHL1-Y402H		
Antibody	Response @3.8E-7M	Cross-reactivity
ATX-P-583	140.85	Yes
ATX-P-587	51.97	Weak
ATX-P-588	276.58	Yes
ATX-P-591	139.56	Yes
ATX-P-592	29.28	No
ATX-P-594	192.59	Yes
ATX-P-595	85.95	Yes
ATX-P-596	134.72	Yes
ATX-P-597	9.01	No
ATX-P-598	7.84	No
ATX-P-599	-1.32	No
ATX-P-600	227.63	Yes
ATX-P-601	-0.53	No
ATX-P-602	-10.20	No
ATX-P-603	6.08	No
ATX-P-604	157.76	Yes
ATX-P-605	14.96	No
ATX-P-607	7.26	No
ATX-P-608	-21.34	No
ATX-P-609	-4.92	No
ATX-P-610	-2.38	No

FIG. 11A:



FIGS. 11A-11D

FIG. 11B:

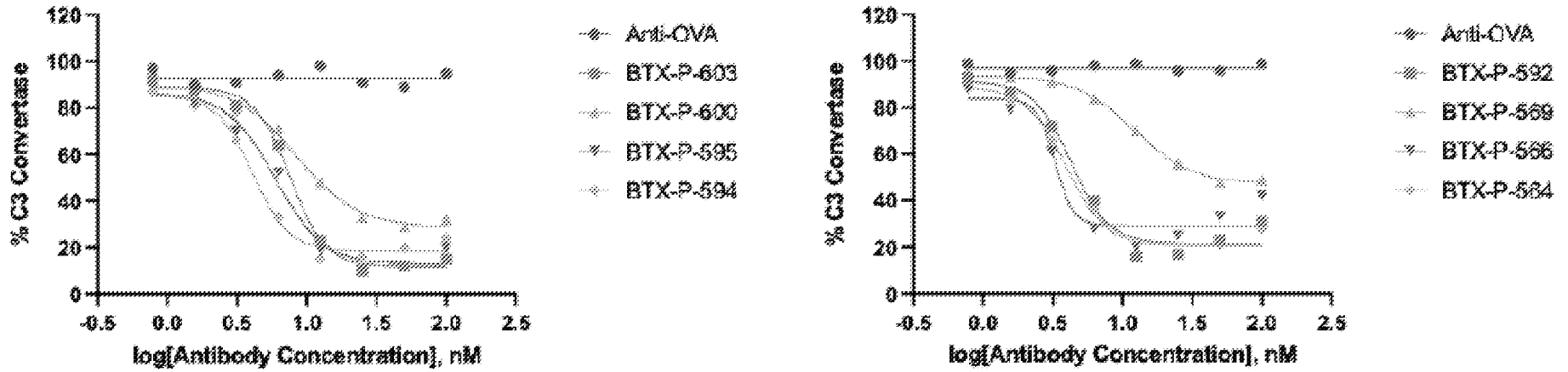


FIG. 11C:

Antibody	IC50 (nM)
ATX-P-603	7.602
ATX-P-600	8.444
ATX-P-595	5.94
ATX-P-594	4.087
ATX-P-592	4.275
ATX-P-569	12.08
ATX-P-566	3.271
ATX-P-564	3.937

FIGS. 11A-11D (cont'd)

FIG. 11D:

		hCFHR4b			hCFHL1	cCFHR4B	Convertase assembly
	Antibody	K_d (M)	Epitope group	Block C3b	Cross-reactivity	Cross-reactivity	IC_{50} [nM]
Block C3b binding	ATX-P-592	9.73E-10	A	Yes	No	Yes	4.2
	ATX-P-594	3.26E-10	A	Yes	Yes	Yes	4.0
Block both sites	ATX-P-603	9.17E-10	A	Yes	No	No	7.6
	ATX-P-595	1.69E-08	A	Yes	Yes	No	5.9
Block site involved in convertase assembly	ATX-P-600	7.39E-09	B	No	Yes	Yes	8.4
	ATX-P-569	1.44E-09	B	No	No	Yes	12.0

FIGS. 11A-11D (cont'd)

FIG. 12A

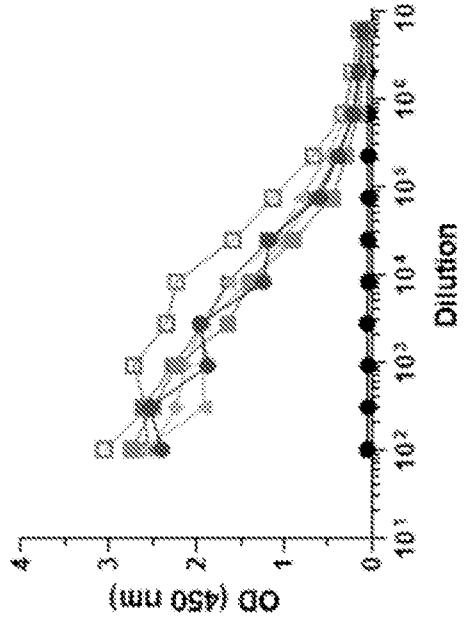


FIG. 12B

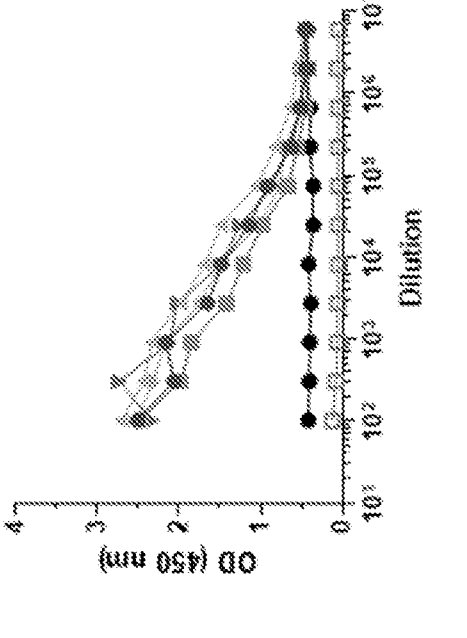


FIG. 12C

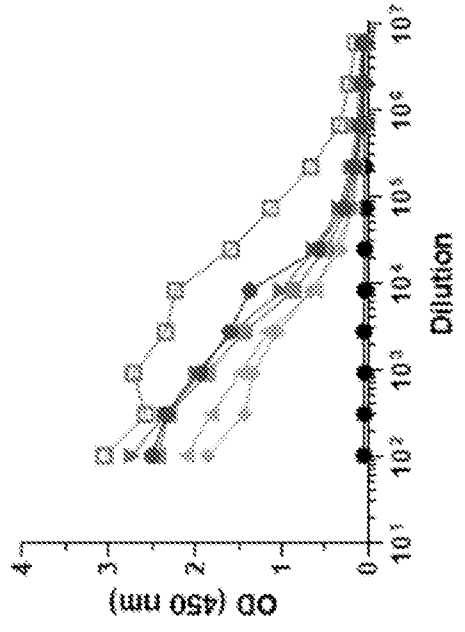
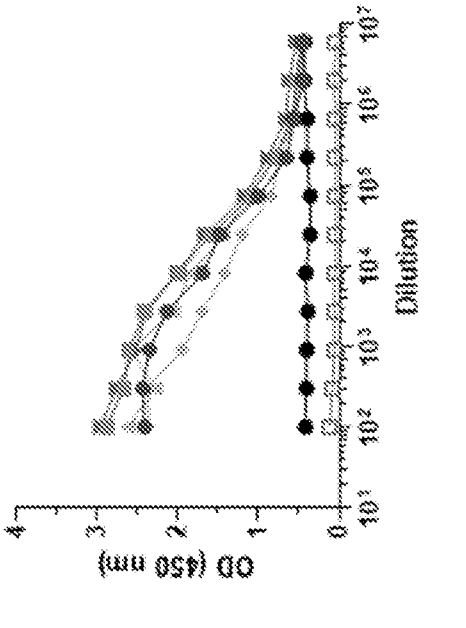


FIG. 12D



FIGS. 12A-12D

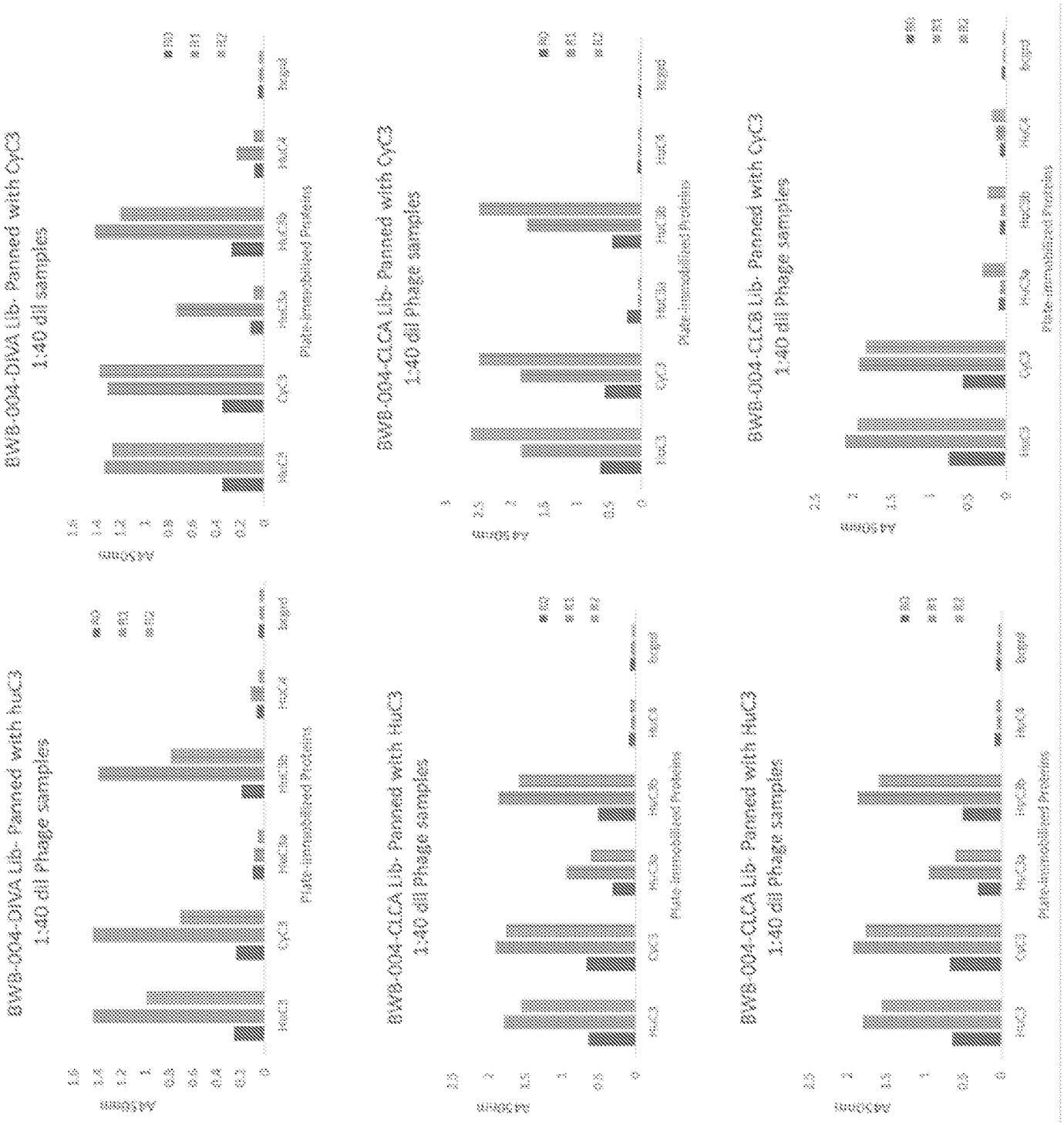
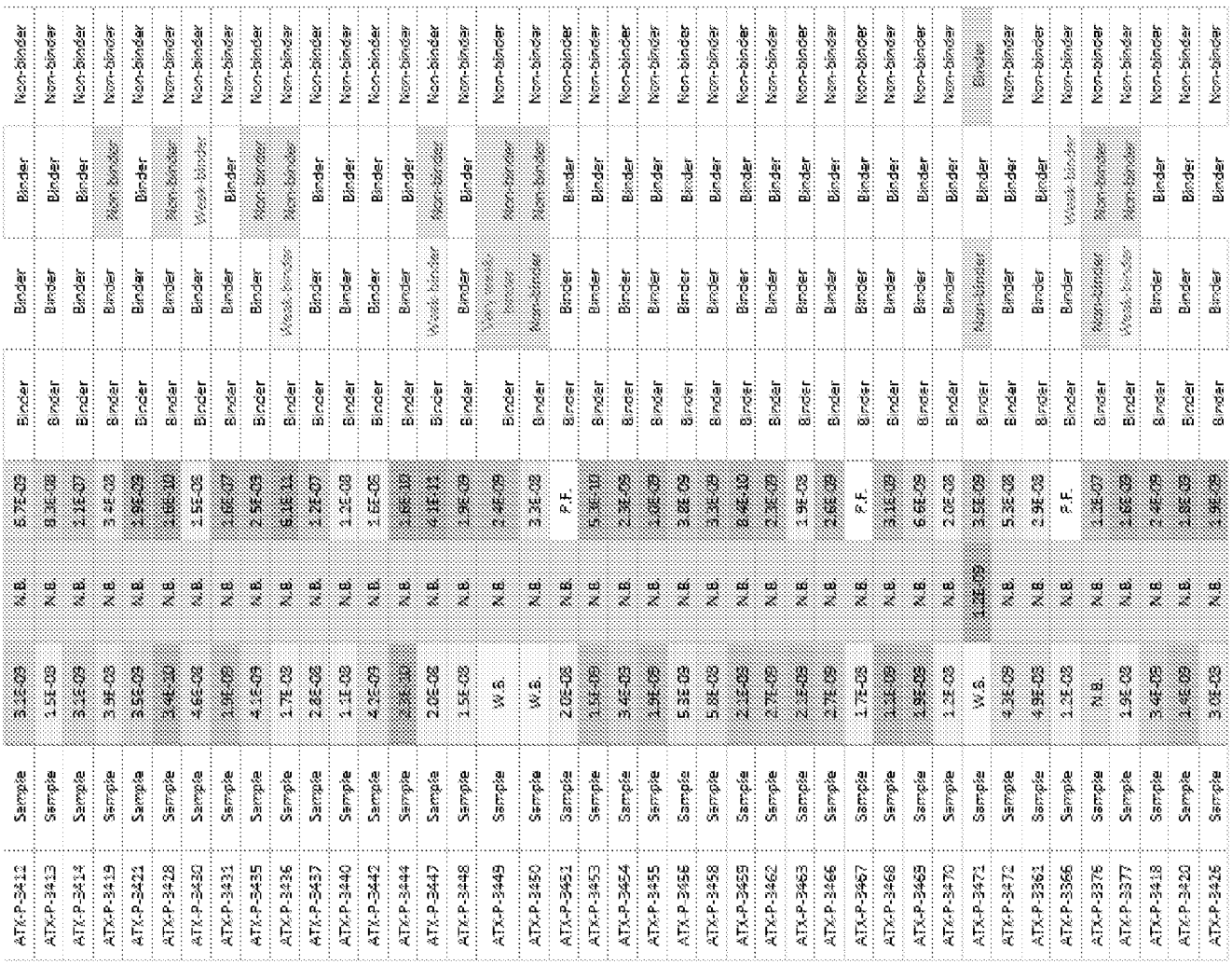

BWB-004-DVA Lib- Panned with huC3
1:40 dil Phage samples
BWB-004-DVA Lib- Panned with CyC3
1:40 dil samples
BWB-004-CLCA Lib- Panned with HuC3
1:40 dil Phage samples
BWB-004-CLCA Lib- Panned with CyC3
1:40 dil Phage samples
BWB-004-CLCB Lib- Panned with HuC3
1:40 dil Phage samples
BWB-004-CLCB Lib- Panned with CyC3
1:40 dil Phage samples
Plate-Immobilized Proteins
huC3
CyC3
HuC3b
HuC4
Irrel
R0
R1
R2

FIG. 13

Sample Info		KD (M)			Binding (based on response)			
Sample ID	Type	huC3b (Comptech)	huC3a (Comptech)	huC3 (Acro)	huC3, Comptech (Positive)	huC3b, Comptech (Positive)	cynoC3, Comptech (Positive)	huC3a, Comptech (Negative)
ATX-P-3360	Sample	1.3E-08	N.B.	7.5E-09	Binder	Binder	Binder	Non-binder
ATX-P-3362	Sample	1.8E-07	N.B.	9.1E-08	Binder	Binder	Non-binder	Non-binder
ATX-P-3363	Sample	1.3E-08	N.B.	1.1E-08	Binder	Binder	Binder	Non-binder
ATX-P-3365	Sample	6.2E-09	N.B.	1.7E-07	Binder	Binder	Binder	Non-binder
ATX-P-3367	Sample	1.9E-07	N.B.	1.0E-08	Binder	Very weak-binder	Non-binder	Non-binder
ATX-P-3369	Sample	N.B.	7.2E-09	5.9E-08	Binder	Non-binder	Non-binder	Binder
ATX-P-3370	Sample	5.9E-08	N.B.	1.4E-08	Binder	Non-binder	Non-binder	Non-binder
ATX-P-3371	Sample	3.4E-08	N.B.	3.3E-09	Binder	Weak-binder	Weak-binder	Non-binder
ATX-P-3373	Sample	5.5E-09	N.B.	5.2E-08	Binder	Binder	Binder	Non-binder
ATX-P-3375	Sample	N.B.	N.B.	6.9E-08	Binder	Non-binder	Non-binder	Non-binder
ATX-P-3378	Sample	4.3E-09	N.B.	6.6E-08	Binder	Binder	Binder	Non-binder
ATX-P-3382	Sample	3.2E-08	N.B.	5.4E-08	Binder	Binder	Binder	Non-binder
ATX-P-3383	Sample	9.4E-09	N.B.	2.0E-07	Binder	Binder	Binder	Non-binder
ATX-P-3384	Sample	8.2E-09	N.B.	2.3E-07	Binder	Binder	Binder	Non-binder
ATX-P-3386	Sample	2.5E-08	N.B.	3.5E-08	Binder	Binder	Binder	Non-binder
ATX-P-3387	Sample	1.7E-08	N.B.	1.2E-07	Binder	Binder	Binder	Non-binder
ATX-P-3389	Sample	3.6E-09	N.B.	4.9E-08	Binder	Binder	Binder	Non-binder
ATX-P-3391	Sample	5.0E-09	N.B.	3.9E-09	Binder	Binder	Binder	Non-binder
ATX-P-3392	Sample	9.4E-09	N.B.	9.9E-08	Binder	Binder	Binder	Non-binder
ATX-P-3395	Sample	2.9E-08	N.B.	2.1E-07	Binder	Binder	Binder	Non-binder
ATX-P-3396	Sample	N.B.	W.B.	1.2E-07	Binder	Non-binder	Binder	Binder
ATX-P-3397	Sample	3.1E-09	N.B.	5.1E-10	Binder	Binder	Binder	Non-binder
ATX-P-3405	Sample	1.7E-07	N.B.	1.1E-07	Binder	Binder	Weak-binder	Non-binder
ATX-P-3406	Sample	1.9E-09	N.B.	3.3E-08	Binder	Binder	Binder	Non-binder
ATX-P-3407	Sample	2.1E-08	N.B.	1.5E-08	Binder	Binder	Binder	Non-binder
ATX-P-3408	Sample	3.1E-10	N.B.	1.8E-10	Binder	Binder	Binder	Non-binder
ATX-P-3410	Sample	2.2E-08	N.B.	6.0E-08	Binder	Binder	Binder	Non-binder

FIG. 14



ATX-P-3412	Sample	3.32E-03	N.B.	8.7E-02	Binder	Binder	Binder	Non-binder
ATX-P-3413	Sample	1.5E-03	N.B.	8.3E-08	Binder	Binder	Binder	Non-binder
ATX-P-3414	Sample	3.1E-03	N.B.	2.1E-07	Binder	Binder	Binder	Non-binder
ATX-P-3419	Sample	3.9E-03	N.B.	3.4E-03	Binder	Binder	Non-binder	Non-binder
ATX-P-3421	Sample	3.5E-03	N.B.	2.9E-03	Binder	Binder	Binder	Non-binder
ATX-P-3428	Sample	3.4E-03	N.B.	2.8E-10	Binder	Binder	Non-binder	Non-binder
ATX-P-3430	Sample	4.6E-02	N.B.	2.5E-03	Binder	Binder	Weak binder	Non-binder
ATX-P-3431	Sample	1.9E-05	N.B.	1.6E-07	Binder	Binder	Binder	Non-binder
ATX-P-3435	Sample	4.1E-03	N.B.	2.5E-03	Binder	Binder	Non-binder	Non-binder
ATX-P-3436	Sample	1.7E-02	N.B.	6.1E-11	Binder	Weak binder	Non-binder	Non-binder
ATX-P-3437	Sample	2.8E-02	N.B.	2.2E-07	Binder	Binder	Binder	Non-binder
ATX-P-3440	Sample	1.1E-02	N.B.	1.2E-08	Binder	Binder	Binder	Non-binder
ATX-P-3442	Sample	4.3E-03	N.B.	1.6E-05	Binder	Binder	Binder	Non-binder
ATX-P-3444	Sample	3.8E-10	N.B.	3.8E-10	Binder	Binder	Binder	Non-binder
ATX-P-3447	Sample	2.0E-02	N.B.	9.1E-11	Binder	Weak binder	Non-binder	Non-binder
ATX-P-3448	Sample	1.5E-03	N.B.	2.9E-09	Binder	Binder	Binder	Non-binder
ATX-P-3449	Sample	W.S.	N.B.	2.4E-05	Binder	Very weak binder	Non-binder	Non-binder
ATX-P-3450	Sample	W.S.	N.B.	3.3E-02	Binder	Non-binder	Non-binder	Non-binder
ATX-P-3451	Sample	2.0E-03	N.B.	P.F.	Binder	Binder	Binder	Non-binder
ATX-P-3453	Sample	1.1E-05	N.B.	5.3E-10	Binder	Binder	Binder	Non-binder
ATX-P-3454	Sample	3.4E-03	N.B.	2.3E-05	Binder	Binder	Binder	Non-binder
ATX-P-3455	Sample	1.9E-05	N.B.	2.0E-09	Binder	Binder	Binder	Non-binder
ATX-P-3456	Sample	5.3E-03	N.B.	3.2E-09	Binder	Binder	Binder	Non-binder
ATX-P-3458	Sample	5.0E-03	N.B.	3.3E-09	Binder	Binder	Binder	Non-binder
ATX-P-3459	Sample	2.2E-03	N.B.	8.4E-10	Binder	Binder	Binder	Non-binder
ATX-P-3462	Sample	2.7E-03	N.B.	2.3E-09	Binder	Binder	Binder	Non-binder
ATX-P-3463	Sample	2.2E-03	N.B.	1.9E-02	Binder	Binder	Binder	Non-binder
ATX-P-3466	Sample	2.7E-03	N.B.	2.6E-09	Binder	Binder	Binder	Non-binder
ATX-P-3467	Sample	1.7E-03	N.B.	P.F.	Binder	Binder	Binder	Non-binder
ATX-P-3468	Sample	4.3E-03	N.B.	3.1E-09	Binder	Binder	Binder	Non-binder
ATX-P-3469	Sample	1.9E-05	N.B.	6.6E-09	Binder	Binder	Binder	Non-binder
ATX-P-3470	Sample	1.2E-03	N.B.	2.0E-02	Binder	Binder	Binder	Non-binder
ATX-P-3472	Sample	W.S.	N.B.	3.5E-09	Non-binder	Non-binder	Binder	Binder
ATX-P-3472	Sample	4.3E-03	N.B.	5.3E-02	Binder	Binder	Binder	Non-binder
ATX-P-3361	Sample	4.9E-03	N.B.	2.9E-02	Binder	Binder	Binder	Non-binder
ATX-P-3366	Sample	1.2E-03	N.B.	P.F.	Binder	Binder	Weak binder	Non-binder
ATX-P-3376	Sample	N.B.	N.B.	1.2E-07	Binder	Non-binder	Non-binder	Non-binder
ATX-P-3377	Sample	1.9E-02	N.B.	1.8E-09	Binder	Weak binder	Non-binder	Non-binder
ATX-P-3418	Sample	3.4E-03	N.B.	2.4E-09	Binder	Binder	Binder	Non-binder
ATX-P-3420	Sample	1.4E-03	N.B.	1.8E-03	Binder	Binder	Binder	Non-binder
ATX-P-3425	Sample	3.0E-03	N.B.	1.4E-09	Binder	Binder	Binder	Non-binder

FIG. 14 (cont'd)

ATX-P-3432	Sample	3.6E-10	N.B.	5.0E-10	Binder	Binder	Binder	Non-binder
ATX-P-3433	Sample	9.3E-08	N.B.	6.1E-08	Binder	Binder	Binder	Non-binder
ATX-P-3438	Sample	9.6E-10	N.B.	8.1E-10	Binder	Binder	Binder	Non-binder
ATX-P-3441	Sample	1.0E-09	N.B.	6.4E-10	Binder	Binder	Binder	Non-binder
ATX-P-3445	Sample	2.9E-09	N.B.	5.8E-11	Binder	Binder	Non-binder	Non-binder
ATX-P-3452	Sample	6.9E-09	W.B.	3.9E-09	Binder	Binder	Binder	Non-binder
ATX-P-1899	Comparator	N/A	N/A	4.6E-10	Binder	Binder	Non-binder	Non-binder

Kinetics Notation	
Abbreviation	Definition
N.B.	Non-binder
W.B.	Weak-binder
P.F.	Poor-fitting (ResSD/Rmax > 10)
L.R.	Low-response (KD not determined)

Cross-Reactivity Notation	
Notation	Definition
Binder	Above-threshold response
Weak	Intermediate response
Non-binder	Below-threshold response

Sample Types	
Type	Definition
Sample	Alloy discovery hits
Comparator	Benchmark produced for campaign
Positive control	Commercial clone / detection reagent
Negative control	Internal isotype controls

FIG. 14 (cont'd)

FIG. 15

Sample Info		Antigens in solution @ 1000 nM							
		hIL5 (positive)		hIL5R (positive)		cynoIL5 (positive)		hIL5 (negative)	
Sample ID	Type	Norm. RU	Binding	Norm. RU	Binding	Norm. RU	Binding	Norm. RU	Binding
ATX-P-3360	Sample	1629.0	Binder	1259.5	Binder	1243.1	Binder	0.0	Non-binder
ATX-P-3362	Sample	969.4	Binder	423.6	Binder	80.5	Non-binder	0.0	Non-binder
ATX-P-3363	Sample	1417.5	Binder	1476.7	Binder	1166.2	Binder	0.0	Non-binder
ATX-P-3365	Sample	1434.0	Binder	1227.2	Binder	934.3	Binder	0.0	Non-binder
ATX-P-3367	Sample	1481.3	Binder	92.4	Very weak binder	21.6	Non-binder	0.0	Non-binder
ATX-P-3369	Sample	1535.4	Binder	14.3	Non-binder	0.0	Non-binder	87.9	Binder
ATX-P-3370	Sample	1291.3	Binder	49.7	Non-binder	34.3	Non-binder	0.0	Non-binder
ATX-P-3371	Sample	1302.0	Binder	123.5	Weak binder	156.3	Weak binder	0.0	Non-binder
ATX-P-3373	Sample	1850.7	Binder	1544.0	Binder	1490.9	Binder	0.0	Non-binder
ATX-P-3375	Sample	976.1	Binder	28.2	Non-binder	67.5	Non-binder	0.0	Non-binder
ATX-P-3378	Sample	1726.3	Binder	1528.5	Binder	1779.8	Binder	0.0	Non-binder
ATX-P-3382	Sample	1453.9	Binder	1275.1	Binder	833.0	Binder	0.0	Non-binder
ATX-P-3383	Sample	1751.0	Binder	1522.3	Binder	1571.4	Binder	0.0	Non-binder
ATX-P-3384	Sample	1435.4	Binder	1314.7	Binder	928.9	Binder	0.0	Non-binder
ATX-P-3386	Sample	949.8	Binder	1013.7	Binder	624.3	Binder	0.0	Non-binder
ATX-P-3387	Sample	737.6	Binder	761.2	Binder	362.9	Binder	0.0	Non-binder
ATX-P-3389	Sample	1324.8	Binder	1168.7	Binder	1264.8	Binder	0.0	Non-binder
ATX-P-3391	Sample	1971.3	Binder	1571.4	Binder	1249.5	Binder	2.2	Non-binder
ATX-P-3392	Sample	1468.8	Binder	1302.0	Binder	1303.6	Binder	0.0	Non-binder
ATX-P-3395	Sample	1737.0	Binder	1678.4	Binder	998.0	Binder	0.0	Non-binder
ATX-P-3396	Sample	1583.6	Binder	11.8	Non-binder	1123.4	Binder	61.5	Binder
ATX-P-3397	Sample	1582.0	Binder	1451.4	Binder	1231.9	Binder	0.0	Non-binder
ATX-P-3405	Sample	541.1	Binder	563.1	Binder	152.3	Weak binder	0.0	Non-binder
ATX-P-3406	Sample	1728.5	Binder	1646.3	Binder	924.9	Binder	0.0	Non-binder
ATX-P-3407	Sample	1423.9	Binder	1312.2	Binder	1007.8	Binder	0.0	Non-binder
ATX-P-3408	Sample	1698.3	Binder	1469.2	Binder	1413.6	Binder	0.0	Non-binder
ATX-P-3410	Sample	706.0	Binder	833.7	Binder	608.9	Binder	0.0	Non-binder
ATX-P-3412	Sample	1198.1	Binder	891.8	Binder	616.3	Binder	0.0	Non-binder
ATX-P-3413	Sample	1356.2	Binder	1318.5	Binder	840.3	Binder	0.0	Non-binder
ATX-P-3414	Sample	1469.6	Binder	1487.1	Binder	863.3	Binder	0.0	Non-binder

FIG. 15 (cont'd)

ATX-P-3419	Sample	1173.5	Binder	1004.3	Binder	0.0	Non-binder	0.0	Non-binder
ATX-P-3421	Sample	1736.1	Binder	1444.9	Binder	1290.3	Binder	0.0	Non-binder
ATX-P-3428	Sample	1619.1	Binder	1454.6	Binder	0.0	Non-binder	0.0	Non-binder
ATX-P-3430	Sample	616.9	Binder	580.0	Binder	203.6	Weak-binder	0.0	Non-binder
ATX-P-3431	Sample	1309.1	Binder	1242.5	Binder	587.1	Binder	0.3	Non-binder
ATX-P-3435	Sample	1492.8	Binder	1242.9	Binder	43.5	Non-binder	0.0	Non-binder
ATX-P-3436	Sample	1712.7	Binder	129.5	Weak-binder	22.1	Non-binder	0.0	Non-binder
ATX-P-3437	Sample	1698.4	Binder	1383.3	Binder	1135.0	Binder	0.0	Non-binder
ATX-P-3440	Sample	1480.2	Binder	1333.0	Binder	636.4	Binder	0.0	Non-binder
ATX-P-3442	Sample	1659.0	Binder	1387.1	Binder	1195.4	Binder	0.0	Non-binder
ATX-P-3444	Sample	1645.2	Binder	1646.0	Binder	787.2	Binder	0.0	Non-binder
ATX-P-3447	Sample	1235.6	Binder	127.4	Weak-binder	0.0	Non-binder	6.3	Non-binder
ATX-P-3448	Sample	1604.0	Binder	270.0	Binder	1364.0	Binder	0.4	Non-binder
ATX-P-3449	Sample	1524.9	Binder	81.6	Very weak-binder	30.7	Non-binder	0.0	Non-binder
ATX-P-3450	Sample	798.8	Binder	24.7	Non-binder	38.6	Non-binder	3.8	Non-binder
ATX-P-3451	Sample	890.1	Binder	1199.7	Binder	1440.7	Binder	0.0	Non-binder
ATX-P-3453	Sample	2057.8	Binder	1723.5	Binder	1636.5	Binder	0.0	Non-binder
ATX-P-3454	Sample	1543.4	Binder	1424.0	Binder	1311.3	Binder	0.0	Non-binder
ATX-P-3455	Sample	1978.6	Binder	1729.2	Binder	1713.2	Binder	0.0	Non-binder
ATX-P-3456	Sample	1825.0	Binder	1676.2	Binder	1516.8	Binder	0.0	Non-binder
ATX-P-3458	Sample	1630.6	Binder	585.4	Binder	1250.5	Binder	0.0	Non-binder
ATX-P-3459	Sample	1788.7	Binder	1606.3	Binder	1304.8	Binder	0.0	Non-binder
ATX-P-3462	Sample	2230.2	Binder	1840.9	Binder	1752.2	Binder	0.0	Non-binder
ATX-P-3463	Sample	1953.7	Binder	1591.0	Binder	1790.2	Binder	0.0	Non-binder
ATX-P-3466	Sample	2026.5	Binder	1738.6	Binder	1325.9	Binder	0.0	Non-binder
ATX-P-3467	Sample	1412.9	Binder	1263.7	Binder	702.6	Binder	0.0	Non-binder
ATX-P-3468	Sample	1752.7	Binder	1445.5	Binder	1660.0	Binder	0.0	Non-binder
ATX-P-3469	Sample	2073.2	Binder	1826.5	Binder	1993.8	Binder	0.0	Non-binder
ATX-P-3470	Sample	738.7	Binder	707.0	Binder	497.0	Binder	0.0	Non-binder
ATX-P-3471	Sample	2048.8	Binder	5.6	Non-binder	1839.1	Binder	93.9	Binder
ATX-P-3472	Sample	1762.5	Binder	1372.3	Binder	1546.6	Binder	0.0	Non-binder
ATX-P-3361	Sample	1029.3	Binder	980.5	Binder	354.7	Binder	0.0	Non-binder
ATX-P-3366	Sample	218.6	Binder	230.8	Binder	192.1	Weak-binder	0.0	Non-binder
ATX-P-3376	Sample	692.9	Binder	30.9	Non-binder	0.0	Non-binder	0.0	Non-binder
ATX-P-3377	Sample	1406.8	Binder	123.4	Weak-binder	20.0	Non-binder	2.9	Non-binder
ATX-P-3418	Sample	1591.0	Binder	1555.9	Binder	1063.8	Binder	0.0	Non-binder
ATX-P-3420	Sample	1777.0	Binder	1787.3	Binder	433.4	Binder	0.0	Non-binder
ATX-P-3426	Sample	1866.9	Binder	652.8	Binder	1768.6	Binder	0.9	Non-binder
ATX-P-3432	Sample	2161.9	Binder	1858.4	Binder	1768.3	Binder	0.0	Non-binder

FIG. 15 (cont'd)

ATX-P-3433	Sample	1281.5	Binder	706.5	Binder	629.2	Binder	0.0	Non-binder
ATX-P-3438	Sample	1941.3	Binder	1589.9	Binder	1592.3	Binder	0.8	Non-binder
ATX-P-3441	Sample	1746.0	Binder	1547.0	Binder	1462.9	Binder	0.0	Non-binder
ATX-P-3446	Sample	1622.7	Binder	246.5	Binder	36.0	Non-binder	0.0	Non-binder
ATX-P-3452	Sample	1788.2	Binder	1404.7	Binder	1259.6	Binder	0.0	Non-binder
ATX-P-1899	Comparator	1643.0	Binder	1690.8	Binder	0.0	Non-binder	0.0	Non-binder
ATX-P-84	Negative Control	0.0	Non-binder	0.0	Non-binder	75.1	Non-binder	2.2	Non-binder

CrossReactivity Notation	
Notation	Definition
Binder	Above-threshold response
Weak-binder	Intermediate response
Very weak-binder	Slightly-above threshold
Non-binder	Below-threshold response

Sample Types	
Type	Definition
Sample	Alloy discovery hits
Comparator	Benchmark produced for campaign
Positive control	Commercial clone / detection reagent
Negative control	Internal isotype controls

Thresholds & Categorization		
Reagent	Rank	Low
huC3 (Positive)	Binder	200.0
	Weak-binder	100.0
	Very weak-binder	50.0
huC3b (Positive)	Binder	200.0
	Weak-binder	100.0
	Very weak-binder	50.0
cynoC3 (Positive)	Binder	250.0
	Weak-binder	150.0
	Very weak-binder	100.0
huC3a (Negative)	Binder	50.0
	Weak-binder	30.0
	Very weak-binder	20.0

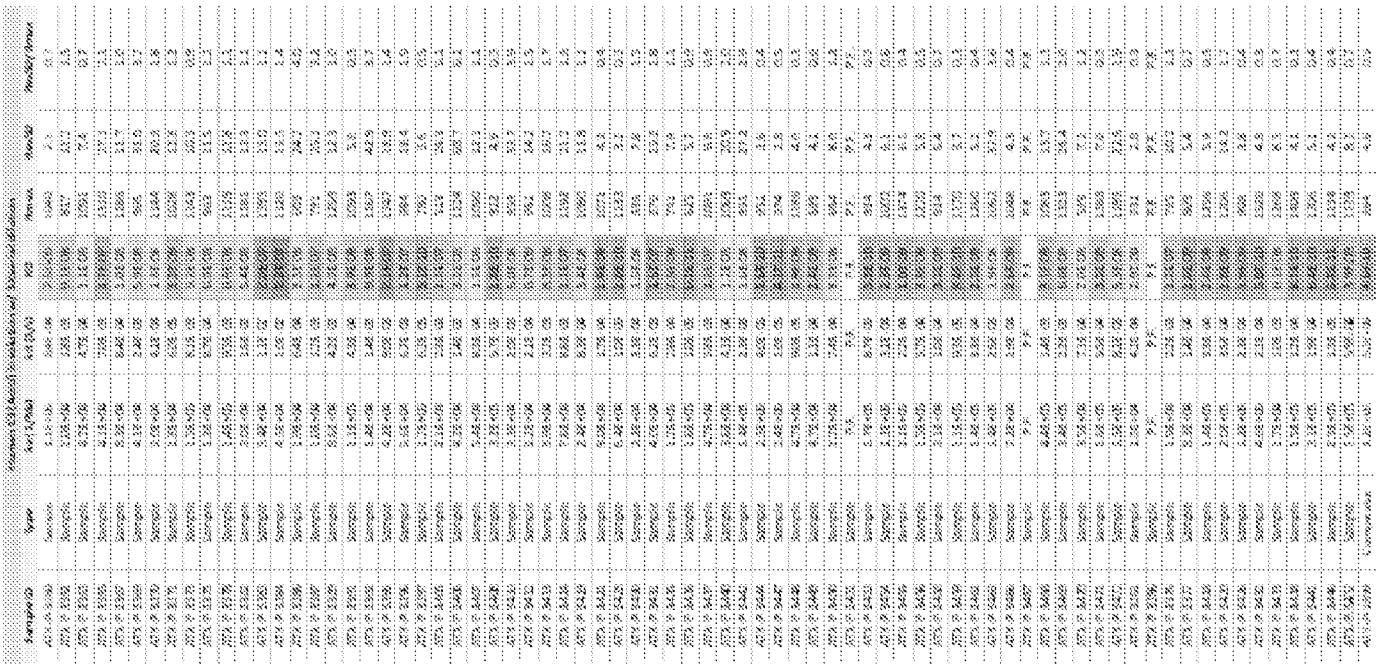
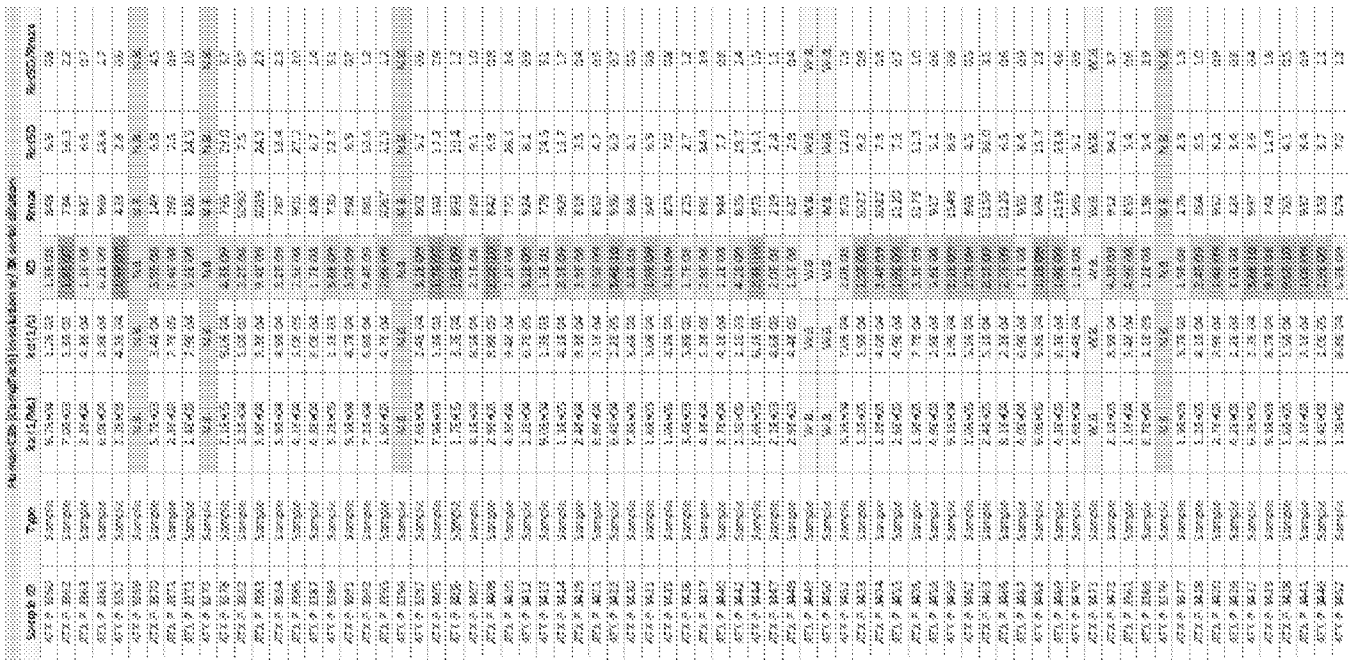


FIG. 16A

FIGS. 16A-16B

FIG. 16B



FIGS. 16A-16B (cont'd)

FIG. 17A

Binning Allocations		
Sample ID	Type	Community
ATX-P-3360	Sample	2
ATX-P-3362	Sample	3
ATX-P-3363	Sample	2
ATX-P-3365	Sample	2
ATX-P-3367	Sample	Excluded
ATX-P-3369	Sample	Excluded
ATX-P-3370	Sample	Excluded
ATX-P-3371	Sample	Excluded
ATX-P-3373	Sample	2
ATX-P-3375	Sample	Excluded
ATX-P-3378	Sample	2
ATX-P-3382	Sample	2
ATX-P-3383	Sample	2
ATX-P-3384	Sample	2
ATX-P-3386	Sample	2
ATX-P-3387	Sample	2
ATX-P-3389	Sample	2
ATX-P-3391	Sample	2
ATX-P-3392	Sample	2
ATX-P-3395	Sample	4
ATX-P-3396	Sample	Excluded
ATX-P-3397	Sample	5
ATX-P-3405	Sample	5
ATX-P-3406	Sample	6
ATX-P-3407	Sample	5
ATX-P-3408	Sample	5
ATX-P-3410	Sample	7
ATX-P-3412	Sample	6
ATX-P-3413	Sample	6
ATX-P-3414	Sample	6
ATX-P-3419	Sample	7
ATX-P-3421	Sample	2
ATX-P-3428	Sample	7

FIGS. 17A-17D

FIG. 17A (cont'd)

ATX-P-3430	Sample	6
ATX-P-3431	Sample	10
ATX-P-3435	Sample	7
ATX-P-3436	Sample	Excluded
ATX-P-3437	Sample	2
ATX-P-3440	Sample	11
ATX-P-3442	Sample	6
ATX-P-3444	Sample	8
ATX-P-3447	Sample	Excluded
ATX-P-3448	Sample	Excluded
ATX-P-3449	Sample	Excluded
ATX-P-3450	Sample	Excluded
ATX-P-3451	Sample	9
ATX-P-3453	Sample	2
ATX-P-3454	Sample	3
ATX-P-3455	Sample	2
ATX-P-3456	Sample	2
ATX-P-3458	Sample	11
ATX-P-3459	Sample	2
ATX-P-3462	Sample	2
ATX-P-3463	Sample	4
ATX-P-3466	Sample	15
ATX-P-3467	Sample	2
ATX-P-3468	Sample	4
ATX-P-3469	Sample	4
ATX-P-3470	Sample	13
ATX-P-3471	Sample	Excluded
ATX-P-3472	Sample	2
ATX-P-3361	Sample	2
ATX-P-3366	Sample	2
ATX-P-3376	Sample	Excluded
ATX-P-3377	Sample	Excluded
ATX-P-3418	Sample	3
ATX-P-3430	Sample	9
ATX-P-3426	Sample	1
ATX-P-3432	Sample	6
ATX-P-3433	Sample	6
ATX-P-3438	Sample	2
ATX-P-3441	Sample	6
ATX-P-3446	Sample	Excluded

ATX-P-3452	Sample	5
ATX-P-1899	Comparator	1

FIGS. 17A-7D (cont'd)

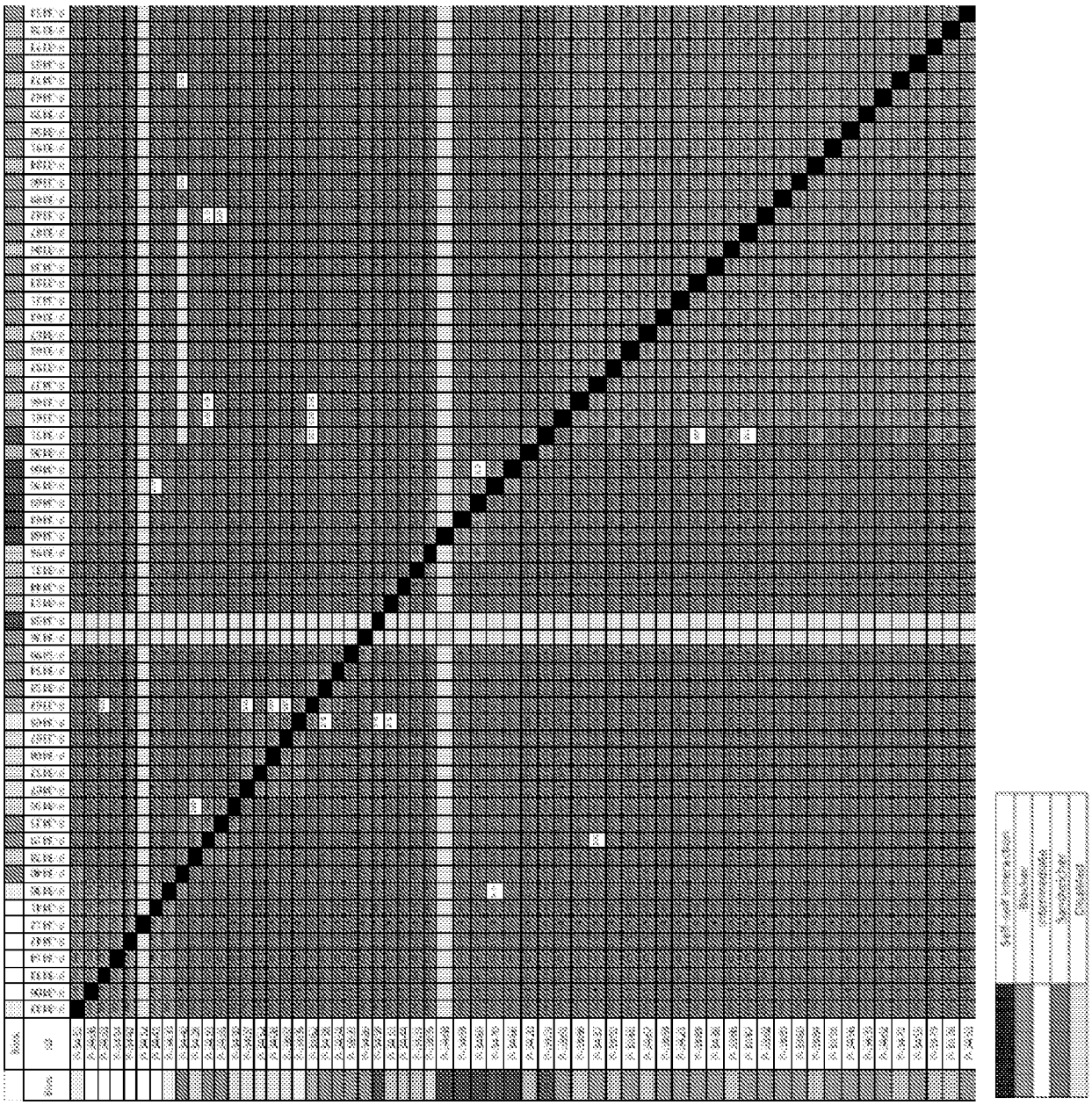


FIG. 17B

FIGS. 17A-17D (cont'd)

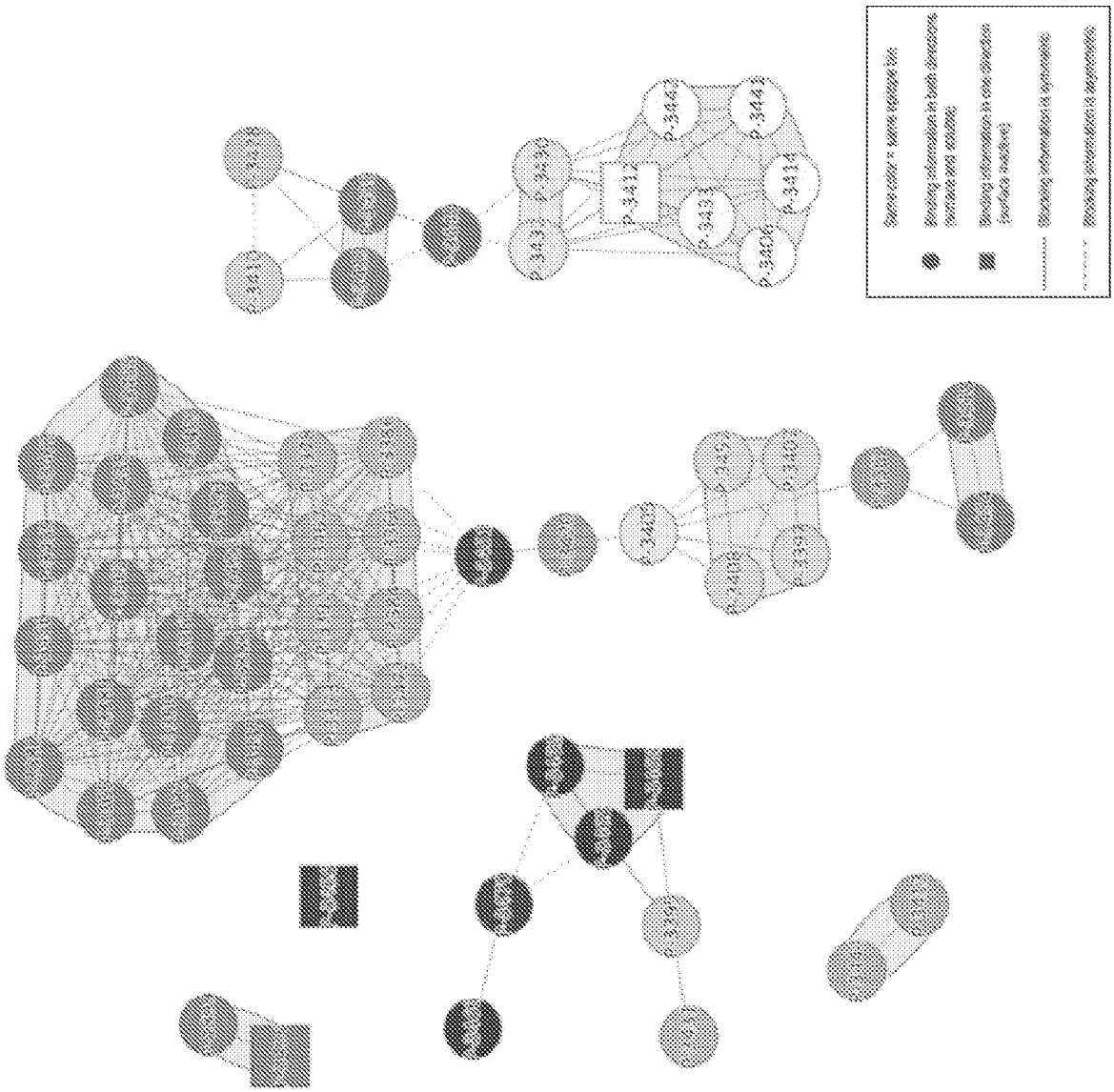


FIG. 17C

FIGS. 17A-17D (cont'd)

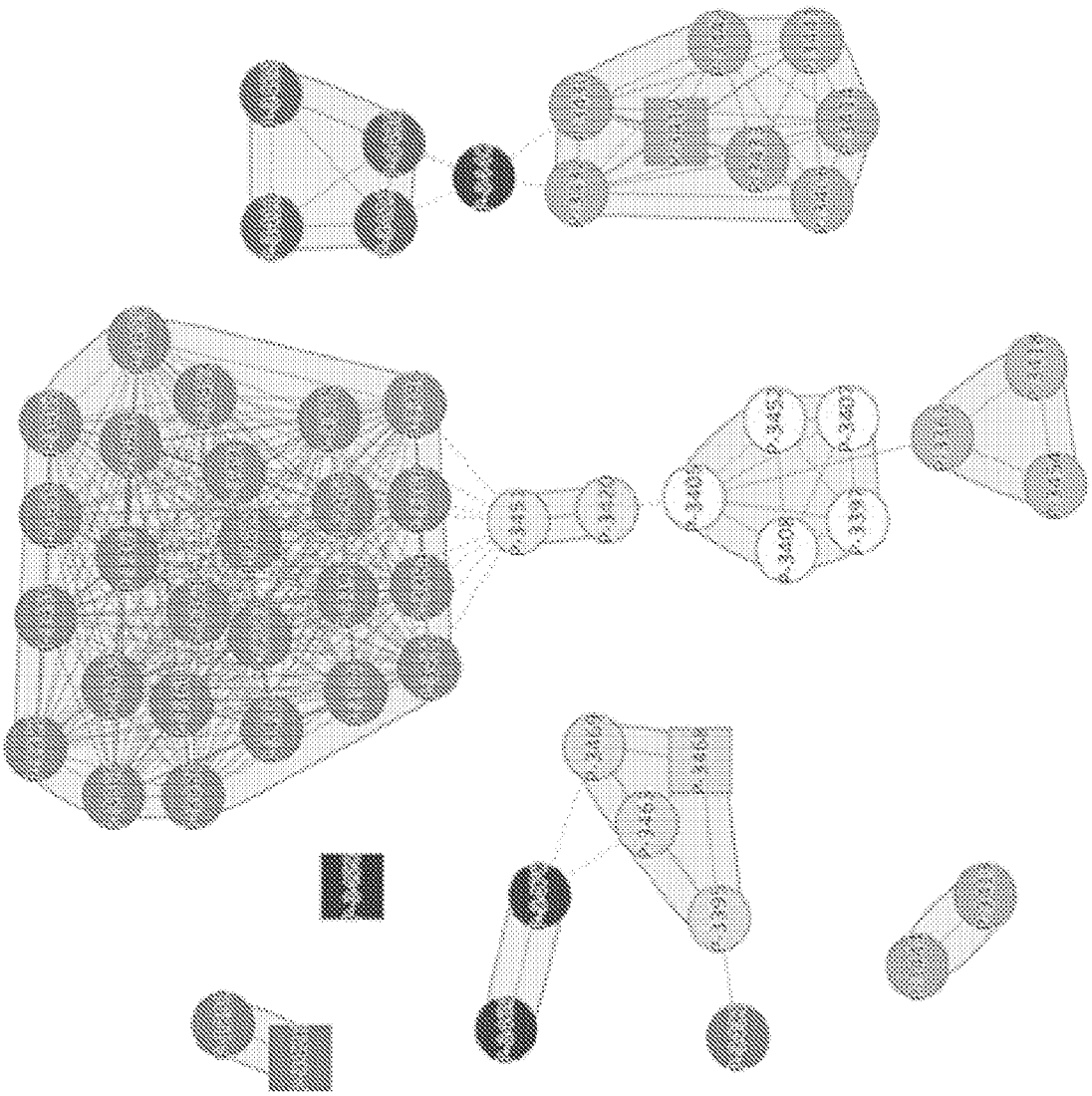


FIG. 17D

FIGS. 17A-17D (cont'd)

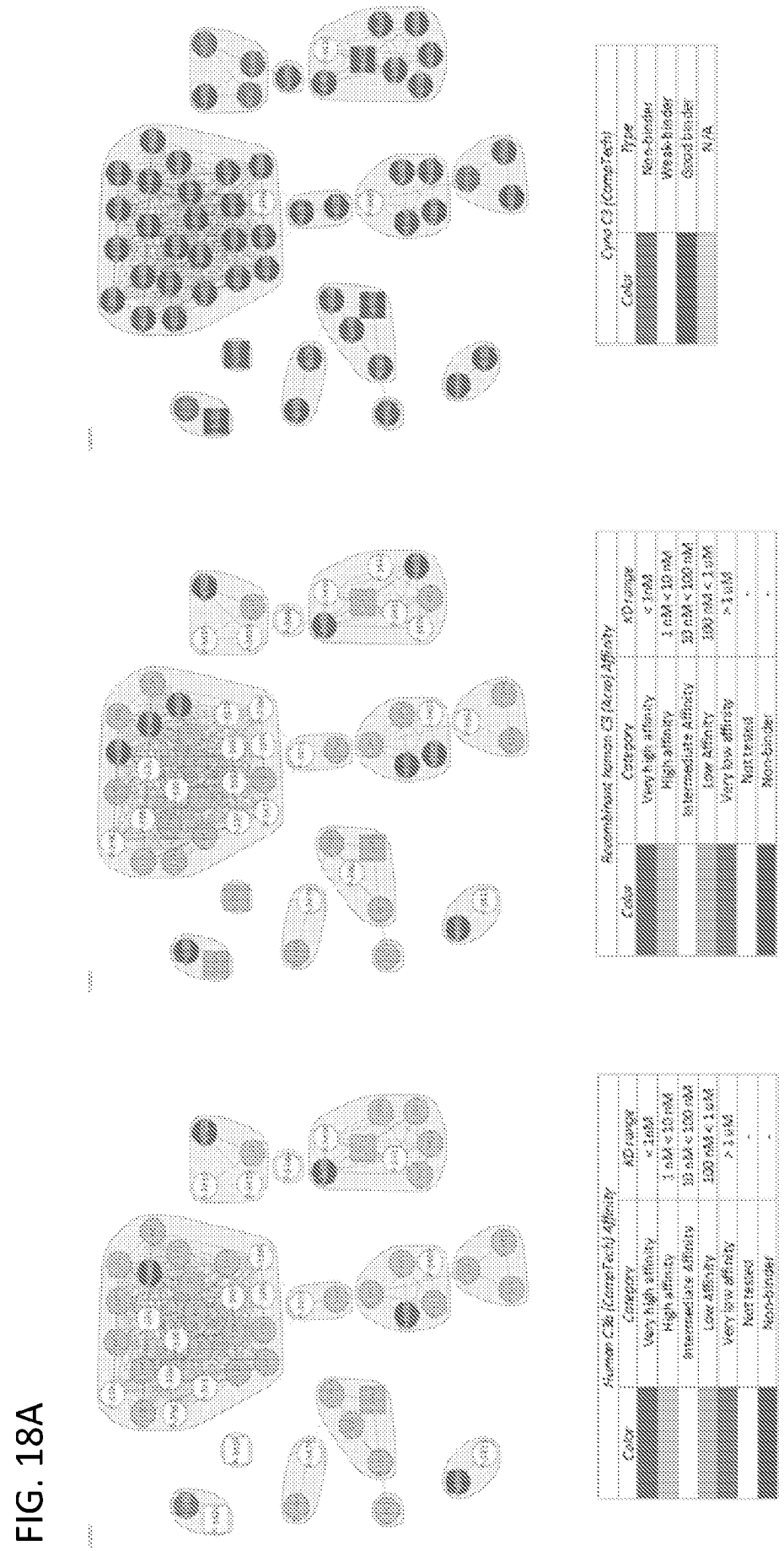


FIG. 18A

FIGS. 18A-18E

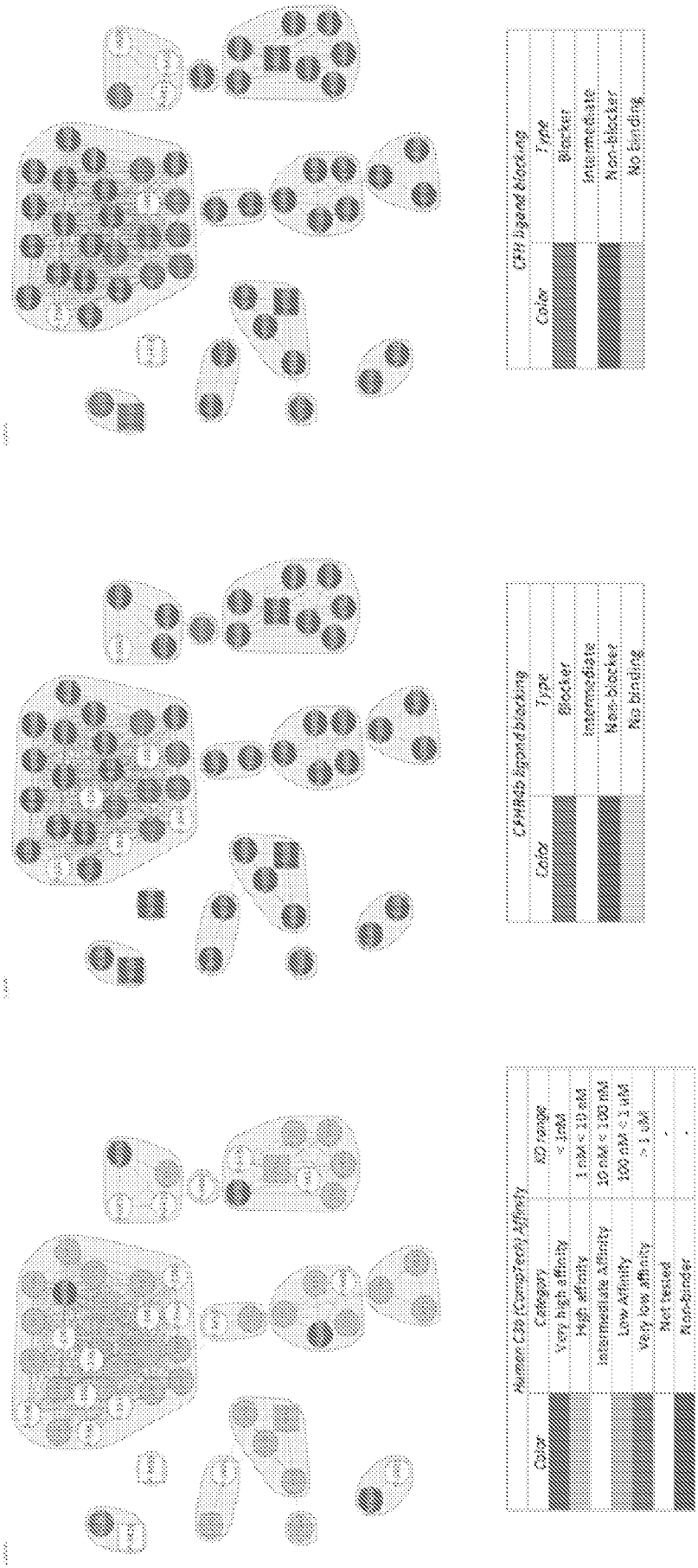


FIG. 18B

FIGS. 18A-18E (cont'd)

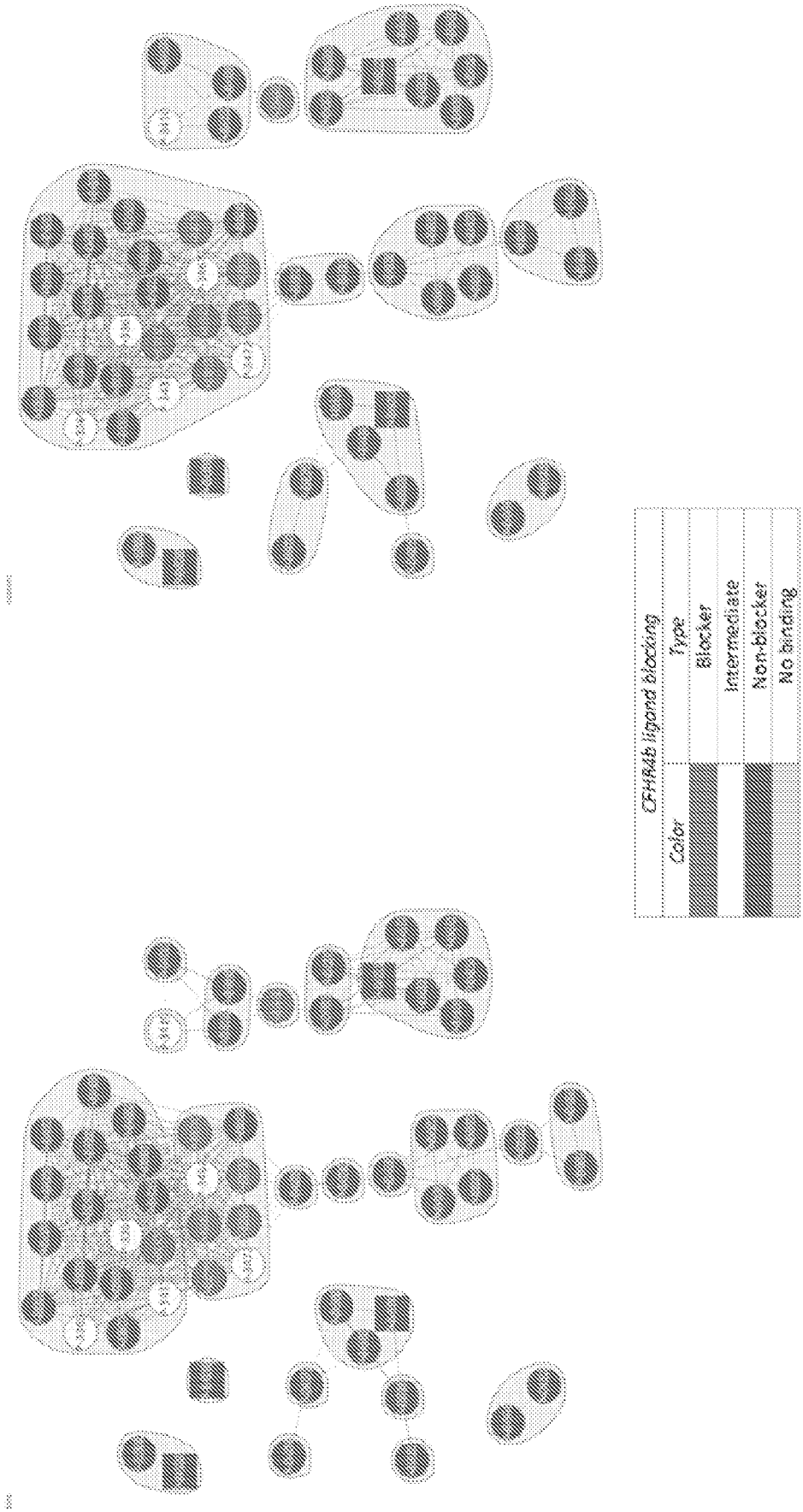


FIG. 18C

FIGS. 18A-18E (cont'd)

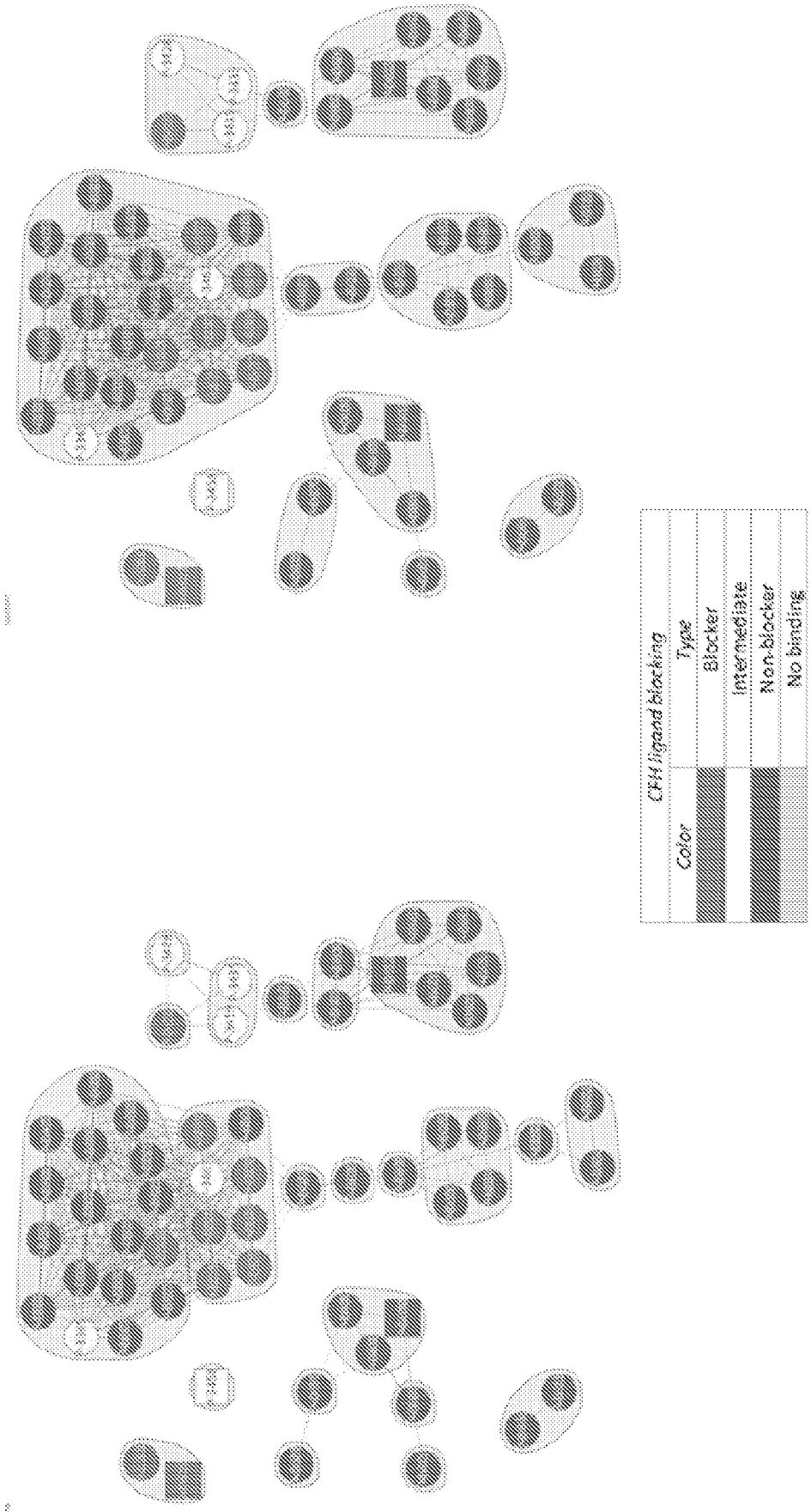


FIG. 18D

FIGS. 18A-18E (cont'd)



FIG. 18E

FIGS. 18A-18E (cont'd)



FIG. 18E

FIGS. 18A-18E (cont'd)

FIG. 19

Sample Info		BVP / BMSA Polyreactivity (Samples)		
		BVP		Blank / BSA
Sample ID	Type	Fold-over BG	Normalized Score	Fold-over BG
ATX-P-3360	Sample	4.06	0.14	4.18
ATX-P-3362	Sample	1.24	0.04	1.72
ATX-P-3363	Sample	3.18	0.11	3.12
ATX-P-3365	Sample	2.11	0.07	1.87
ATX-P-3367	Sample	3.16	0.11	6.70
ATX-P-3369	Sample	3.70	0.13	2.62
ATX-P-3370	Sample	4.28	0.15	4.10
ATX-P-3371	Sample	4.48	0.16	4.49
ATX-P-3373	Sample	3.48	0.12	3.12
ATX-P-3375	Sample	3.97	0.14	4.56
ATX-P-3378	Sample	2.59	0.09	2.72
ATX-P-3382	Sample	1.84	0.06	2.25
ATX-P-3383	Sample	0.89	0.03	1.97
ATX-P-3384	Sample	5.19	0.18	2.45
ATX-P-3386	Sample	2.73	0.10	2.17
ATX-P-3387	Sample	3.16	0.11	2.81
ATX-P-3389	Sample	9.42	0.33	4.76
ATX-P-3391	Sample	2.32	0.08	2.10
ATX-P-3392	Sample	3.06	0.11	2.67
ATX-P-3395	Sample	1.97	0.07	2.06
ATX-P-3396	Sample	3.11	0.11	1.59
ATX-P-3397	Sample	2.29	0.08	2.02
ATX-P-3405	Sample	1.89	0.07	2.52
ATX-P-3406	Sample	3.09	0.11	1.92
ATX-P-3407	Sample	1.96	0.07	2.44
ATX-P-3408	Sample	1.72	0.06	2.54
ATX-P-3410	Sample	1.92	0.07	1.59

FIG. 19
(cont'd)

ATX-P-3412	Sample	1.03	0.04	2.41
ATX-P-3413	Sample	2.63	0.09	3.20
ATX-P-3414	Sample	2.24	0.08	2.93
ATX-P-3419	Sample	3.14	0.11	2.11
ATX-P-3421	Sample	2.04	0.07	1.91
ATX-P-3428	Sample	0.86	0.03	1.73
ATX-P-3430	Sample	2.79	0.10	2.37
ATX-P-3431	Sample	3.31	0.12	2.43
ATX-P-3435	Sample	3.07	0.11	2.40
ATX-P-3436	Sample	6.03	0.21	4.14
ATX-P-3437	Sample	3.27	0.11	3.77
ATX-P-3440	Sample	2.59	0.09	3.33
ATX-P-3442	Sample	4.80	0.17	3.80
ATX-P-3444	Sample	5.37	0.19	4.52
ATX-P-3447	Sample	5.29	0.18	5.48
ATX-P-3448	Sample	5.51	0.19	4.15
ATX-P-3449	Sample	2.34	0.08	3.26
ATX-P-3450	Sample	6.08	0.21	3.54
ATX-P-3451	Sample	0.99	0.03	2.36
ATX-P-3453	Sample	0.91	0.03	1.70
ATX-P-3454	Sample	2.41	0.08	4.92
ATX-P-3455	Sample	0.76	0.03	1.79
ATX-P-3456	Sample	5.11	0.18	3.69
ATX-P-3458	Sample	1.69	0.06	3.50
ATX-P-3459	Sample	1.90	0.07	3.83
ATX-P-3462	Sample	1.56	0.05	3.04
ATX-P-3463	Sample	2.54	0.09	3.67
ATX-P-3466	Sample	1.42	0.05	2.94
ATX-P-3467	Sample	1.62	0.06	3.19
ATX-P-3468	Sample	3.45	0.12	4.85
ATX-P-3469	Sample	1.43	0.05	3.11
ATX-P-3470	Sample	0.98	0.03	2.16
ATX-P-3471	Sample	0.82	0.03	1.68
ATX-P-3472	Sample	1.02	0.04	1.52
ATX-P-3361	Sample	1.55	0.05	4.43
ATX-P-3366	Sample	1.31	0.05	3.49
ATX-P-3376	Sample	2.87	0.10	3.96
ATX-P-3377	Sample	6.50	0.23	9.70

FIG. 19 (cont'd)

ATX-P-3418	Sample	1.29	0.04	2.23
ATX-P-3420	Sample	3.82	0.13	2.53
ATX-P-3426	Sample	2.95	0.10	2.08
ATX-P-3432	Sample	1.65	0.06	3.48
ATX-P-3433	Sample	1.68	0.06	3.03
ATX-P-3438	Sample	1.16	0.04	2.91
ATX-P-3441	Sample	1.74	0.06	3.51
ATX-P-3446	Sample	3.78	0.13	5.55
ATX-P-3452	Sample	1.72	0.06	3.33
ATX-P-1899	Comparator	1.90	0.07	2.27

Sample Info		BVP / BLISA Polyreactivity (Avg. Controls)		
		BVP		Blank / BSA
Sample ID	Type	Fold-over BG	Normalized Score	Fold-over BG
Adalimumab	Negative Control	1.66	0.05	3.76
ATX-P-104	Negative Control	3.01	0.1	7.07
ATX-P-1390	Intermediate Control	7.60	0.25	2.00
ATX-P-102	Positive Control	14.04	0.5	2.39

Flags	Flags Thresholds
	BVP
Red-flag	>0.25
Yellow-flag	0.2-0.25
Borderline	0.15-0.2
No-flag	0.15

FIG. 20

Sample Info		LSA Polyreactivity											
		HSP90		HEK-CF		HEK-MP		KLH		LPS		Hemoglobin	
Sample ID	Type	RU	Rank	RU	Rank	RU	Rank	RU	Rank	RU	Rank	RU	Rank
ATX-P-3360	Sample	0.0	0.00	4.8	0.00	55.5	0.00	38.1	0.00	30.5	1.00	62.0	0.00
ATX-P-3362	Sample	31.7	0.00	2.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3363	Sample	25.6	0.00	51.1	0.00	66.5	0.00	27.0	0.00	6.4	0.00	0.5	0.00
ATX-P-3365	Sample	91.5	0.50	54.3	0.00	55.8	0.00	42.0	0.00	28.0	0.75	121.8	0.75
ATX-P-3367	Sample	109.3	0.75	248.4	0.50	666.9	1.00	375.5	1.00	16.4	0.00	57.3	0.00
ATX-P-3369	Sample	73.3	0.50	115.3	0.00	132.8	0.00	67.5	0.00	1.0	0.00	20.7	0.00
ATX-P-3370	Sample	63.8	0.50	468.5	1.00	804.1	1.00	584.8	1.00	36.5	1.00	82.3	0.50
ATX-P-3371	Sample	87.8	0.50	356.4	1.00	822.0	1.00	519.4	1.00	25.8	0.75	118.8	0.75
ATX-P-3373	Sample	59.2	0.50	12.0	0.00	17.1	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3375	Sample	206.8	1.00	187.1	0.50	194.1	0.00	135.4	0.50	0.0	0.00	1.5	0.00
ATX-P-3378	Sample	17.1	0.00	63.6	0.00	42.2	0.00	56.4	0.00	42.9	1.00	7.5	0.00
ATX-P-3382	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3383	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3384	Sample	33.9	0.00	58.3	0.00	83.3	0.00	47.3	0.00	0.0	0.00	8.4	0.00
ATX-P-3386	Sample	0.0	0.00	66.0	0.00	150.8	0.00	61.3	0.00	5.8	0.00	23.5	0.00
ATX-P-3387	Sample	0.0	0.00	210.2	0.50	457.0	1.00	353.6	1.00	13.7	0.00	101.9	0.75
ATX-P-3389	Sample	345.4	0.75	587.9	1.00	862.8	1.00	791.7	1.00	0.0	0.00	31.3	0.00
ATX-P-3391	Sample	20.4	0.00	0.0	0.00	113.7	0.00	29.0	0.00	0.0	0.00	48.4	0.00
ATX-P-3392	Sample	25.6	0.00	56.9	0.00	34.7	0.00	47.0	0.00	30.7	1.00	24.4	0.00
ATX-P-3395	Sample	17.1	0.00	25.2	0.00	5.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3396	Sample	0.0	0.00	76.3	0.00	117.7	0.00	144.1	0.50	0.0	0.00	3.4	0.00
ATX-P-3397	Sample	28.6	0.00	71.8	0.00	104.2	0.00	63.3	0.00	11.9	0.00	43.7	0.00
ATX-P-3405	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3406	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3407	Sample	0.0	0.00	0.0	0.00	10.6	0.00	0.0	0.00	15.1	0.00	38.6	0.00
ATX-P-3408	Sample	0.0	0.00	0.0	0.00	33.3	0.00	6.3	0.00	42.6	1.00	64.6	0.00
ATX-P-3410	Sample	0.0	0.00	0.0	0.00	7.8	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3412	Sample	148.3	0.75	240.6	0.50	193.8	0.00	164.6	0.50	0.0	0.00	138.3	0.75

FIG. 20 (cont'd)

ATX-P-3413	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	3.6	0.00	0.0	0.00
ATX-P-3414	Sample	0.0	0.00	0.0	0.00	131.3	0.00	52.5	0.00	0.0	0.00	0.0	0.00
ATX-P-3419	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3421	Sample	15.2	0.00	0.0	0.00	51.9	0.00	38.3	0.00	14.5	0.00	33.2	0.00
ATX-P-3428	Sample	69.6	0.50	39.5	0.00	22.2	0.00	75.3	0.00	0.0	0.00	14.5	0.00
ATX-P-3430	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3431	Sample	0.0	0.00	13.6	0.00	0.0	0.00	44.6	0.00	0.0	0.00	0.0	0.00
ATX-P-3435	Sample	0.0	0.00	0.0	0.00	0.0	0.00	48.9	0.00	0.0	0.00	0.0	0.00
ATX-P-3436	Sample	232.7	1.00	1464.7	1.00	1697.7	1.00	1596.5	1.00	0.0	0.00	276.3	1.00
ATX-P-3437	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3440	Sample	11.7	0.00	52.1	0.00	247.4	0.00	160.4	0.50	0.0	0.00	0.0	0.00
ATX-P-3442	Sample	0.0	0.00	623.6	1.00	811.4	1.00	649.3	1.00	0.0	0.00	0.0	0.00
ATX-P-3444	Sample	429.0	1.00	503.4	1.00	1133.6	1.00	955.0	1.00	0.0	0.00	108.2	0.75
ATX-P-3447	Sample	42.0	0.00	221.1	0.50	312.9	0.50	296.3	0.75	12.7	0.00	15.4	0.00
ATX-P-3448	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	4.5	0.00	2.2	0.00
ATX-P-3449	Sample	53.0	0.50	65.1	0.00	90.7	0.00	52.0	0.00	13.3	0.00	16.9	0.00
ATX-P-3450	Sample	78.8	0.50	475.6	1.00	704.4	1.00	736.9	1.00	0.0	0.00	0.0	0.00
ATX-P-3451	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3453	Sample	0.0	0.00	0.0	0.00	133.5	0.00	0.0	0.00	0.0	0.00	86.4	0.50
ATX-P-3454	Sample	0.0	0.00	0.0	0.00	44.3	0.00	0.0	0.00	11.1	0.00	0.0	0.00
ATX-P-3455	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3456	Sample	14.0	0.00	2.4	0.00	66.5	0.00	2.2	0.00	0.0	0.00	5.6	0.00
ATX-P-3458	Sample	0.0	0.00	0.0	0.00	0.0	0.00	12.2	0.00	0.0	0.00	0.0	0.00
ATX-P-3459	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3462	Sample	0.0	0.00	0.0	0.00	91.4	0.00	31.2	0.00	17.9	0.00	53.2	0.00
ATX-P-3463	Sample	108.1	0.75	297.1	0.75	458.2	1.00	326.3	1.00	96.5	1.00	100.2	0.75
ATX-P-3466	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3467	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	9.7	0.00	0.0	0.00
ATX-P-3468	Sample	1.2	0.00	181.4	0.50	478.2	1.00	384.2	1.00	0.0	0.00	4.6	0.00
ATX-P-3469	Sample	0.0	0.00	0.0	0.00	0.0	0.00	28.7	0.00	0.0	0.00	5.0	0.00
ATX-P-3470	Sample	41.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3471	Sample	72.5	0.50	30.6	0.00	0.0	0.00	12.3	0.00	10.3	0.00	10.1	0.00
ATX-P-3472	Sample	149.0	0.75	172.6	0.50	91.8	0.00	78.2	0.00	20.1	0.50	69.8	0.00
ATX-P-3361	Sample	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	2.3	0.00	0.0	0.00
ATX-P-3366	Sample	21.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00	0.0	0.00
ATX-P-3376	Sample	0.0	0.00	76.3	0.00	405.7	0.75	178.7	0.50	0.0	0.00	0.0	0.00

FIG. 20 (cont'd)

Sample Info		LSA Polyreactivity (Avg. Controls)											
		HSP90		HEK-CP		HEK-IMP		KLH		LPS		Hemoglobin	
Sample ID	Type	RU	Rank	RU	Rank	RU	Rank	RU	Rank	RU	Rank	RU	Rank
ATX-P-103	Negative Control	0.0	0.00	0.0	0.00	0.0	0.00	45.8	0.00	12.9	0.00	73.8	0.00
ATX-P-104	Intermediate Control	52.4	0.50	103.4	0.00	257.0	0.50	177.4	0.50	0.0	0.00	23.9	0.00
ATX-P-102	Positive Control	295.6	1.00	314.5	0.75	848.5	1.00	783.1	1.00	37.7	1.00	100.0	0.50
ATX-P-1894	Positive Control	29.0	0.00	1211.2	1.00	1446.3	1.00	1370.5	1.00	0.0	0.00	6.8	0.00

Flag Thresholds				
Reagent	Rank	Low	High	Rank
HSP90	High	150.0		1.00
	Intermediate	100.0	150.0	0.75
	Low-intermediate	50.0	100.0	0.50
HEK-CP	High	350.0		1.00
	Intermediate	250.0	350.0	0.75
	Low-intermediate	150.0	250.0	0.50
HEK-IMP	High	450.0		1.00
	Intermediate	350.0	450.0	0.75
	Low-intermediate	250.0	350.0	0.50
KLH	High	300.0		1.00
	Intermediate	200.0	300.0	0.75
	Low-intermediate	100.0	200.0	0.50
LPS	High	30.0		1.00
	Intermediate	25.0	30.0	0.75
	Low-intermediate	20.0	25.0	0.50
Hemoglobin	High	150.0		1.00
	Intermediate	100.0	150.0	0.75
	Low-intermediate	75.0	100.0	0.50

FIG. 21A

Sample Info		C3b/CFHR4b Blocking					
Sample ID	Type	C3b	Buffer	C3b	CFHR4b	Norm. % Delta RU	CFHR4B blocker?
ATX-P-3360	Sample	1733.97	1376.04	1601.13	1485.1	13.40	Non-blocker
ATX-P-3362	Sample	459.71	338.56	375.18	439.0	43.58	Non-blocker
ATX-P-3363	Sample	1724.69	1604.68	1595.63	1634.1	9.37	Non-blocker
ATX-P-3365	Sample	1320.60	981.30	1271.46	1062.0	9.22	Intermediate
ATX-P-3367	Sample	189.28	196.30	165.99	218.9	28.18	Intermediate
ATX-P-3369	Sample	154.68	180.71	43.83	46.1	-7.18	N/A
ATX-P-3370	Sample	233.71	282.00	214.94	327.1	31.90	Intermediate
ATX-P-3371	Sample	339.53	410.20	297.43	474.3	39.64	Non-blocker
ATX-P-3373	Sample	1606.93	944.18	1518.90	972.8	5.29	Blocker
ATX-P-3375	Sample	40.18	45.86	35.58	41.2	N.B.	N/A
ATX-P-3378	Sample	1812.36	1087.77	1708.03	1065.0	2.33	Blocker
ATX-P-3382	Sample	1432.41	1122.60	1345.84	1217.8	12.12	Non-blocker
ATX-P-3383	Sample	1469.46	917.64	1409.62	961.1	5.73	Blocker
ATX-P-3384	Sample	1335.01	879.51	1245.98	896.9	6.77	Blocker
ATX-P-3386	Sample	1160.37	893.22	1087.35	931.1	8.65	Non-blocker
ATX-P-3387	Sample	855.76	753.08	793.27	794.7	14.51	Non-blocker
ATX-P-3389	Sample	1383.87	867.07	1318.76	953.8	9.67	Non-blocker
ATX-P-3391	Sample	1720.77	1584.73	1594.53	1667.6	12.48	Non-blocker
ATX-P-3392	Sample	1419.96	1162.87	1353.10	1171.2	4.66	Blocker
ATX-P-3395	Sample	2177.01	1921.47	2117.03	2258.1	18.40	Non-blocker
ATX-P-3396	Sample	440.36	346.52	91.18	105.8	37.35	Non-blocker
ATX-P-3397	Sample	1893.82	1849.44	1769.51	2027.5	16.93	Non-blocker
ATX-P-3405	Sample	683.31	330.23	656.50	435.9	18.06	Non-blocker
ATX-P-3406	Sample	1911.87	1732.77	1826.96	1877.3	12.12	Non-blocker
ATX-P-3407	Sample	1600.49	1293.13	1507.56	1538.3	11.74	Non-blocker
ATX-P-3408	Sample	2147.07	2129.09	2046.34	2309.7	19.71	Non-blocker
ATX-P-3410	Sample	856.61	541.63	832.78	620.0	13.22	Intermediate
ATX-P-3412	Sample	1197.92	1189.97	943.54	1054.2	11.29	Non-blocker
ATX-P-3413	Sample	1562.13	988.88	1513.71	1402.9	29.38	Non-blocker
ATX-P-3414	Sample	1817.52	1443.80	1729.99	1616.3	18.93	Non-blocker
ATX-P-3419	Sample	1110.63	893.85	1065.40	991.1	11.62	Non-blocker
ATX-P-3421	Sample	1876.00	1781.32	1745.84	1803.6	8.36	Non-blocker
ATX-P-3428	Sample	1608.10	1617.06	1541.85	1706.1	18.10	Non-blocker
ATX-P-3430	Sample	451.69	423.94	438.26	589.1	40.56	Non-blocker
ATX-P-3431	Sample	760.68	673.23	662.30	724.2	20.04	Non-blocker
ATX-P-3435	Sample	1554.04	1408.99	1490.52	1553.1	13.54	Non-blocker
ATX-P-3436	Sample	104.37	150.74	86.65	145.7	19.68	Non-blocker

FIGS. 21A-21B

FIG. 21A (cont'd)

ATX-P-3437	Sample	1241.59	600.15	1190.01	639.3	5.39	Intermediate
ATX-P-3440	Sample	1484.00	1411.72	1168.19	1113.8	0.21	Blocker
ATX-P-3442	Sample	1646.82	1146.62	1576.42	1297.2	13.66	Non-blocker
ATX-P-3444	Sample	2179.58	2177.55	2303.74	2674.4	22.24	Non-blocker
ATX-P-3447	Sample	89.89	108.90	76.23	106.6	15.13	Blocker
ATX-P-3448	Sample	177.52	182.35	171.80	226.9	29.16	Non-blocker
ATX-P-3449	Sample	37.49	37.36	34.24	37.7	N.B.	N/A
ATX-P-3450	Sample	170.12	256.53	140.13	258.8	33.91	N/A
ATX-P-3451	Sample	1456.97	1234.94	1413.94	1426.0	16.09	Non-blocker
ATX-P-3453	Sample	2204.30	2144.64	2073.48	2208.2	9.20	Non-blocker
ATX-P-3454	Sample	1661.85	1538.43	1628.07	1992.5	23.91	Non-blocker
ATX-P-3455	Sample	2369.90	2213.44	2222.63	2213.7	6.20	Non-blocker
ATX-P-3456	Sample	2103.91	1815.32	1990.93	1857.4	7.01	Non-blocker
ATX-P-3458	Sample	701.36	675.72	645.10	789.5	20.04	Non-blocker
ATX-P-3459	Sample	1899.70	1863.64	1747.35	1880.6	9.53	Non-blocker
ATX-P-3462	Sample	2183.01	1959.89	2067.64	2046.9	9.22	Non-blocker
ATX-P-3463	Sample	2071.21	1561.66	2001.71	1907.6	19.93	Non-blocker
ATX-P-3466	Sample	1949.06	1900.26	1818.28	2258.5	46.74	Non-blocker
ATX-P-3467	Sample	1000.03	843.44	951.01	890.9	9.34	Intermediate
ATX-P-3468	Sample	174.87	142.55	115.65	126.2	27.61	Non-blocker
ATX-P-3469	Sample	2418.04	1750.17	2351.47	2174.5	20.09	Non-blocker
ATX-P-3470	Sample	692.86	604.86	678.37	818.7	38.38	Non-blocker
ATX-P-3471	Sample	275.07	336.76	38.06	40.7	L.R.	N/A
ATX-P-3472	Sample	1858.22	1164.95	1777.36	1200.0	4.63	Intermediate
ATX-P-3361	Sample	942.85	864.05	889.21	899.5	9.51	Intermediate
ATX-P-3366	Sample	424.38	298.86	414.15	315.8	5.79	Blocker
ATX-P-3376	Sample	115.64	113.19	107.54	120.1	13.81	N/A
ATX-P-3377	Sample	253.91	360.52	205.79	390.6	47.82	Non-blocker
ATX-P-3418	Sample	1908.09	1800.44	1830.85	2241.1	43.05	Non-blocker
ATX-P-3420	Sample	2346.30	2196.43	2284.83	2441.7	18.26	Non-blocker
ATX-P-3426	Sample	461.56	468.66	442.40	644.4	64.14	Non-blocker
ATX-P-3432	Sample	2698.60	2637.51	2516.59	2841.5	15.17	Non-blocker
ATX-P-3433	Sample	617.74	402.66	598.55	525.3	22.57	Non-blocker
ATX-P-3438	Sample	2079.58	2041.40	1958.39	2068.0	7.49	Non-blocker
ATX-P-3441	Sample	1719.65	1611.62	1635.86	1887.6	21.67	Non-blocker
ATX-P-3446	Sample	300.91	410.23	255.17	471.7	48.51	Non-blocker
ATX-P-3452	Sample	1805.50	1485.36	1620.45	1677.7	21.27	Non-blocker
ATX-P-1899	Comparator	1768.56	1762.35	1755.63	2239.4	27.61	Non-blocker
ATX-P-84	Negative Control	40.09	36.80	36.35	31.7	N.B.	N/A

FIGS. 21A-21B (cont'd)

FIG. 21B

Sample ID	Type	C3b	Buffer	C3b	CFH	Norm. % Delta RU	huCFH blocker?
ATX-P-3360	Sample	1733.97	1376.04	1661.60	1834.6	31.05	Non-blocker
ATX-P-3362	Sample	459.71	338.56	402.93	412.6	18.48	Non-blocker
ATX-P-3363	Sample	1724.69	1604.68	1653.69	2027.0	29.53	Non-blocker
ATX-P-3365	Sample	1320.60	981.80	1292.76	1027.1	5.14	Intermediate
ATX-P-3367	Sample	189.28	196.30	173.99	191.4	6.32	Blocker
ATX-P-3369	Sample	154.68	180.71	56.86	71.2	8.31	N/A
ATX-P-3370	Sample	233.71	282.00	223.66	319.0	21.95	Intermediate
ATX-P-3371	Sample	339.53	410.20	308.68	396.1	7.56	Intermediate
ATX-P-3373	Sample	1606.93	944.18	1558.46	923.0	0.47	Blocker
ATX-P-3375	Sample	40.13	45.86	34.60	43.1	N.B.	N/A
ATX-P-3378	Sample	1812.36	1087.77	1754.82	1063.3	0.57	Blocker
ATX-P-3382	Sample	1432.41	1122.60	1383.79	1642.6	40.68	Non-blocker
ATX-P-3383	Sample	1469.46	917.64	1437.02	944.1	5.25	Blocker
ATX-P-3384	Sample	1335.01	870.51	1285.51	888.0	3.87	Blocker
ATX-P-3386	Sample	1160.37	893.22	1118.27	1061.1	17.91	Non-blocker
ATX-P-3387	Sample	855.76	733.08	820.26	838.5	15.06	Non-blocker
ATX-P-3389	Sample	1383.87	867.07	1346.38	1195.6	25.14	Non-blocker
ATX-P-3391	Sample	1720.77	1584.73	1646.92	2007.0	29.77	Non-blocker
ATX-P-3392	Sample	1429.96	1162.87	1381.06	1195.6	4.67	Blocker
ATX-P-3395	Sample	2177.01	1921.47	2148.82	2159.2	12.22	Non-blocker
ATX-P-3396	Sample	440.36	346.52	148.01	150.1	28.71	Intermediate
ATX-P-3397	Sample	1893.82	1849.44	1826.93	2384.9	32.89	Non-blocker
ATX-P-3405	Sample	683.31	330.23	668.71	446.4	18.43	Non-blocker
ATX-P-3406	Sample	1911.87	1732.77	1871.74	1946.8	13.28	Non-blocker
ATX-P-3407	Sample	1600.49	1293.13	1549.81	1944.3	44.66	Non-blocker
ATX-P-3408	Sample	2147.07	2129.09	2092.22	2682.1	24.03	Non-blocker
ATX-P-3410	Sample	856.61	541.63	844.05	530.3	-0.40	Blocker
ATX-P-3412	Sample	1197.92	1189.97	1027.97	1188.9	16.32	Non-blocker
ATX-P-3413	Sample	1562.13	988.88	1539.61	1645.5	43.57	Non-blocker
ATX-P-3414	Sample	1817.52	1443.80	1772.12	1672.0	14.91	Non-blocker
ATX-P-3419	Sample	1110.63	893.05	1086.04	602.1	-24.97	Intermediate
ATX-P-3421	Sample	1876.00	1781.32	1806.22	2096.8	21.38	Non-blocker
ATX-P-3428	Sample	1608.10	1617.06	1571.41	1601.5	1.36	Intermediate
ATX-P-3430	Sample	451.69	423.94	445.30	595.3	39.84	Non-blocker
ATX-P-3431	Sample	760.58	673.23	673.06	674.8	10.87	Non-blocker
ATX-P-3435	Sample	1554.04	1408.99	1528.38	1300.8	-4.00	Intermediate
ATX-P-3436	Sample	104.37	150.74	94.93	145.2	8.55	Blocker
ATX-P-3437	Sample	1241.58	608.15	1214.93	843.6	11.10	Non-blocker
ATX-P-3440	Sample	1484.00	1411.72	1279.12	1468.5	19.68	Non-blocker

FIGS. 21A-21B (cont'd)

FIG. 21B (cont'd)

ATX-P-3442	Sample	1646.82	1146.62	1611.48	1524.4	24.67	Non-blocker
ATX-P-3444	Sample	2179.58	2177.55	2135.35	2932.7	37.64	Non-blocker
ATX-P-3447	Sample	85.99	108.90	88.14	100.7	-0.96	Blocker
ATX-P-3448	Sample	177.52	182.35	173.28	194.8	9.72	Blocker
ATX-P-3449	Sample	37.49	37.36	34.75	38.1	N.B.	N/A
ATX-P-3450	Sample	170.12	256.53	155.26	226.8	-5.04	N/A
ATX-P-3451	Sample	1456.97	1234.94	1430.77	1343.2	9.12	Non-blocker
ATX-P-3453	Sample	2204.50	2144.64	2134.50	2415.9	15.89	Non-blocker
ATX-P-3454	Sample	1661.85	1538.43	1644.43	2210.8	43.87	Non-blocker
ATX-P-3455	Sample	2369.90	2213.44	2287.26	2470.3	14.60	Non-blocker
ATX-P-3456	Sample	2103.91	1815.32	2047.37	2260.4	44.52	Non-blocker
ATX-P-3458	Sample	701.36	675.72	671.29	699.4	7.85	Intermediate
ATX-P-3459	Sample	1899.70	1863.64	1822.21	2247.5	45.24	Non-blocker
ATX-P-3462	Sample	2183.01	1959.89	2118.19	2397.8	33.42	Non-blocker
ATX-P-3463	Sample	2071.21	1561.66	2034.96	1813.8	13.75	Non-blocker
ATX-P-3466	Sample	1949.06	1900.26	1880.80	2506.2	38.75	Non-blocker
ATX-P-3467	Sample	1000.03	843.44	968.90	908.5	9.41	Intermediate
ATX-P-3468	Sample	174.87	142.55	132.70	146.1	28.58	Non-blocker
ATX-P-3469	Sample	2418.04	1750.17	2379.82	2235.8	23.57	Non-blocker
ATX-P-3470	Sample	692.86	604.86	685.87	899.5	49.84	Non-blocker
ATX-P-3471	Sample	275.07	336.76	93.85	67.3	2.64	N/A
ATX-P-3472	Sample	1858.22	1164.95	1810.87	1127.3	-0.44	Blocker
ATX-P-3361	Sample	942.85	864.05	910.56	1143.2	38.91	Non-blocker
ATX-P-3366	Sample	424.18	298.86	418.55	307.5	3.00	Blocker
ATX-P-3376	Sample	115.64	113.19	108.04	103.3	-2.52	N/A
ATX-P-3377	Sample	253.91	360.52	228.75	317.6	-3.16	Blocker
ATX-P-3418	Sample	1908.09	1800.44	1862.08	2464.6	34.20	Non-blocker
ATX-P-3420	Sample	2346.30	2196.43	2314.17	2733.5	24.51	Non-blocker
ATX-P-3426	Sample	461.56	468.66	450.40	470.9	3.02	Blocker
ATX-P-3432	Sample	2698.60	2637.51	2598.94	3287.6	25.68	Non-blocker
ATX-P-3433	Sample	617.74	402.66	608.31	494.9	10.17	Non-blocker
ATX-P-3438	Sample	2079.58	2041.40	2012.13	2408.1	23.51	Non-blocker
ATX-P-3441	Sample	1719.65	1611.62	1678.25	2128.5	38.11	Non-blocker
ATX-P-3446	Sample	300.91	410.23	270.81	381.6	4.57	Blocker
ATX-P-3452	Sample	1805.50	1485.36	1706.42	2064.8	38.73	Non-blocker
ATX-P-1899	Comparator	1768.56	1762.35	1761.22	1762.2	0.41	Blocker
ATX-P-84	Negative Control	40.09	38.80	38.09	45.8	N.B.	N/A

FIGS. 21A-21B (cont'd)

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International application No
PCT/US2023/020365

A. CLASSIFICATION OF SUBJECT MATTER
INV. C07K16/18 A61P27/02
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A61P C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2019/215330 A1 (UNIV MANCHESTER [GB]) 14 November 2019 (2019-11-14) page 54, lines 12-16 page 7 - page 8; claims 17,18 page 35, line 1 - line 20; example 2 ----- -/--	1-268

[x] Further documents are listed in the continuation of Box C.

[x] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance;; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance;; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
9 August 2023	18/08/2023

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Renggli-Zulliger, N

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Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2023/020365

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.c of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of a sequence listing:

   a. [X] forming part of the international application as filed.

   b. [ ] furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)).

      [ ] accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.

2. [ ] With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this report has been established to the extent that a meaningful search could be carried out without a WIPO Standard ST.26 compliant sequence listing.

3. Additional comments:

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2023/020365

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 6, 7, 16-18(all partially)
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims;; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	HEBECKER MARIO ET AL: "Factor H-related Protein 4 Activates Complement by Serving as a Platform for the Assembly of Alternative Pathway C3 Convertase via Its Interaction with C3b Protein", JOURNAL OF BIOLOGICAL CHEMISTRY , vol. 287, no. 23 1 June 2012 (2012-06-01), pages 19528-19536, XP093069986, US ISSN: 0021-9258, DOI: 10.1074/jbc.M112.364471 Retrieved from the Internet: URL:http://dx.doi.org/10.1074/jbc.M112.364471 MAB5980 : anti hCFHR4b monoclonal mouse IgG1; page 19529, left-hand column, paragraph 3	1-268
Y	-& Anonymous: "Human Complement Factor H-related 4/ CFHR4 Antibody ; Catalog Number: MAB5980", R&D systems; biotechne, 2 July 2018 (2018-07-02), pages 1-2, XP093069980, Retrieved from the Internet: URL:https://www.rndsystems.com/products/human-complement-factor-h-related-4-cfhr4-antibody-640212_mab5980 [retrieved on 2023-08-03] the whole document MAB5980 : anti hCFHR4b monoclonal mouse IgG1	1-268
Y	WO 2008/154251 A2 (GENENTECH INC [US]; VAN LOOKEREN CAMPAGNE MENNO [US]) 18 December 2008 (2008-12-18) page 23, line 14 - line 36; claims 1,7,14,19; example 1; sequence 9	1-268
Y	ULRICH BRINKMANN ET AL: "The making of bispecific antibodies", MABS, vol. 9, no. 2, 10 January 2017 (2017-01-10), pages 182-212, XP055531122, US ISSN: 1942-0862, DOI: 10.1080/19420862.2016.1268307 the whole document	1-268

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2023/020365

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CIPRIANI VALENTINA ET AL: "Increased circulating levels of factor H-related protein 4 are strongly associated with age-related macular degeneration", NATURE COMMUNICATIONS , vol. 11, no. 1 1 December 2020 (2020-12-01), XP055852430, DOI: 10.1038/s41467-020-14499-3 Retrieved from the Internet: URL:https://www.nature.com/articles/s41467-020-14499-3.pdf abstract -----	1-268
A	BORDET THIERRY ET AL: "Ocular gene therapies in clinical practice: viral vectors and nonviral alternatives", DRUG DISCOVERY TODAY, ELSEVIER, AMSTERDAM, NL, vol. 24, no. 8, 5 June 2019 (2019-06-05), pages 1685-1693, XP085782111, ISSN: 1359-6446, DOI: 10.1016/J.DRUDIS.2019.05.038 [retrieved on 2019-06-05] cited in the application the whole document -----	1-268

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2023/020365

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2019215330 A1	14-11-2019	AU 2019266548 A1	07-01-2021
		CA 3100995 A1	14-11-2019
		CN 112470003 A	09-03-2021
		EP 3791180 A1	17-03-2021
		JP 2021523369 A	02-09-2021
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		WO 2019215330 A1	14-11-2019
WO 2008154251 A2	18-12-2008	AR 066916 A1	23-09-2009
		AU 2008262048 A1	18-12-2008
		BR PI0812767 A2	02-12-2014
		CA 2690124 A1	18-12-2008
		CL 2008001656 A1	22-05-2009
		CN 101809034 A	18-08-2010
		EP 2162470 A2	17-03-2010
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		RU 2009149385 A	20-07-2011
		SG 182165 A1	30-07-2012
		SG 10201608952Q A	29-12-2016
		TW 200911827 A	16-03-2009
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		US 2009081211 A1	26-03-2009
		US 2012128674 A1	24-05-2012
		WO 2008154251 A2	18-12-2008
		ZA 200907575 B	23-02-2011

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 6, 7, 16-18(all partially)

Present set of claims relates to an extremely large number of possible compounds due to sequence combinations which may or may not generate an antibody with defined technical properties. In view of the importance of the role played by each single amino acid in the binding of an antibody to its target, especially at the level of its CDRs (see Rudikoff et.al., PNAS 1982, Vol.79, pp. 1979-1983), a claim to an antibody which is structurally characterised by less than the full sequence of all the CDRs, and their specific order, cannot be seen to sufficiently disclose an antibody with any particular properties.

Thus, it is apparent that a search of all possible combinations of claimed sequences, and variants of these sequences, would not be useful, since only an antibody defined by at least 6 CDRs (HCDR1-3, LCDR1-3) has any defined technical properties of binding.

Therefore, subject-matter of claims 6a, 7a,16-18 was restricted to the antibodies defined by their 6 CDRs (no variations) for each antibody to be combined in a bi-specific anti-CFHR4b x C3b antibody: anti-CFHR4b antibodies constructed and tested in Figures 6-10according to the 6 CDRs of table 3 and anti-C3b antibodies constructed and tested in Figures 14-21 according to the 6 CDRs of Table 6

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guidelines C-IV, 7.2), should the problems which led to the Article 17(2) PCT declaration be overcome.