FIG. 1

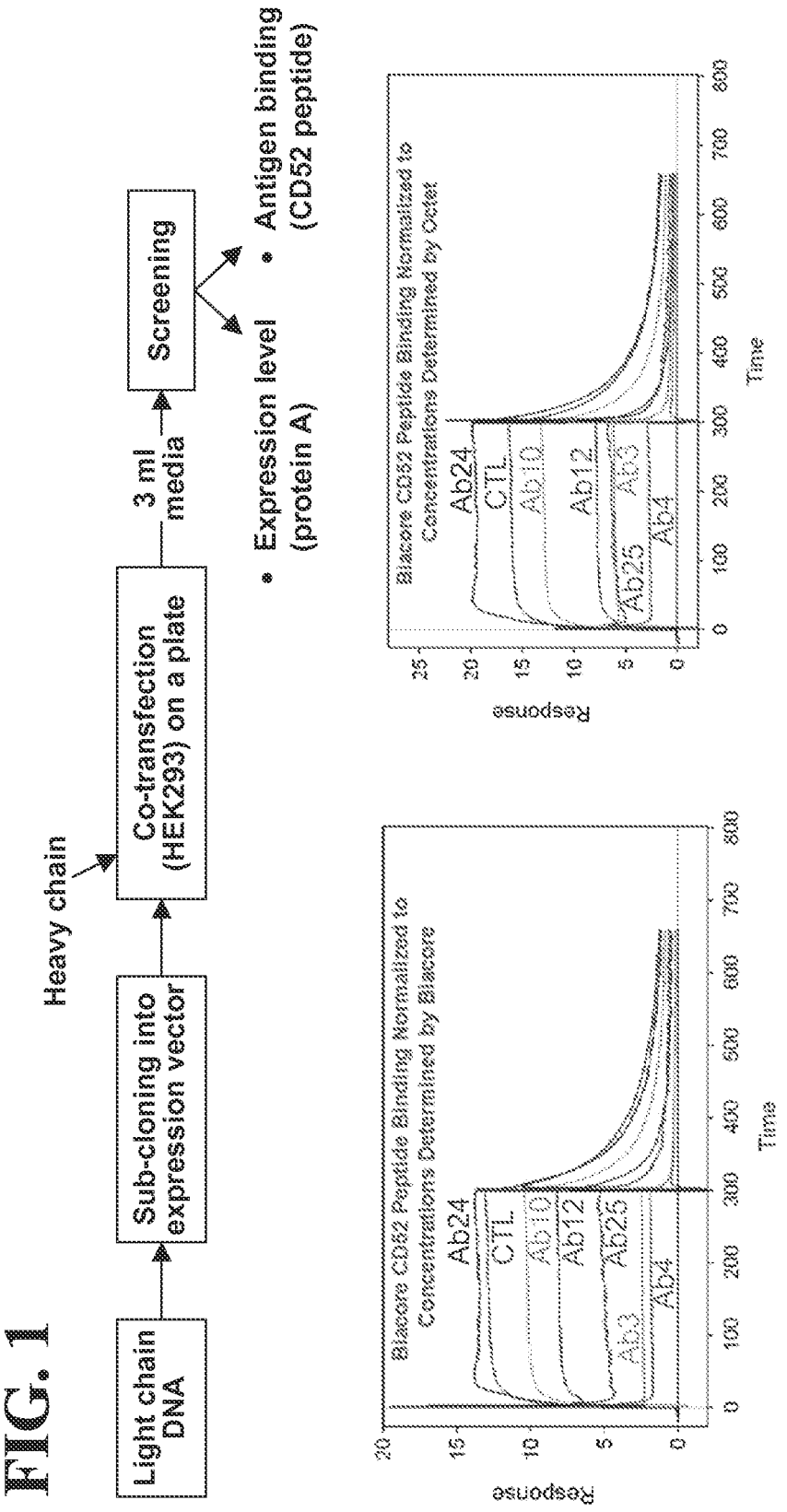
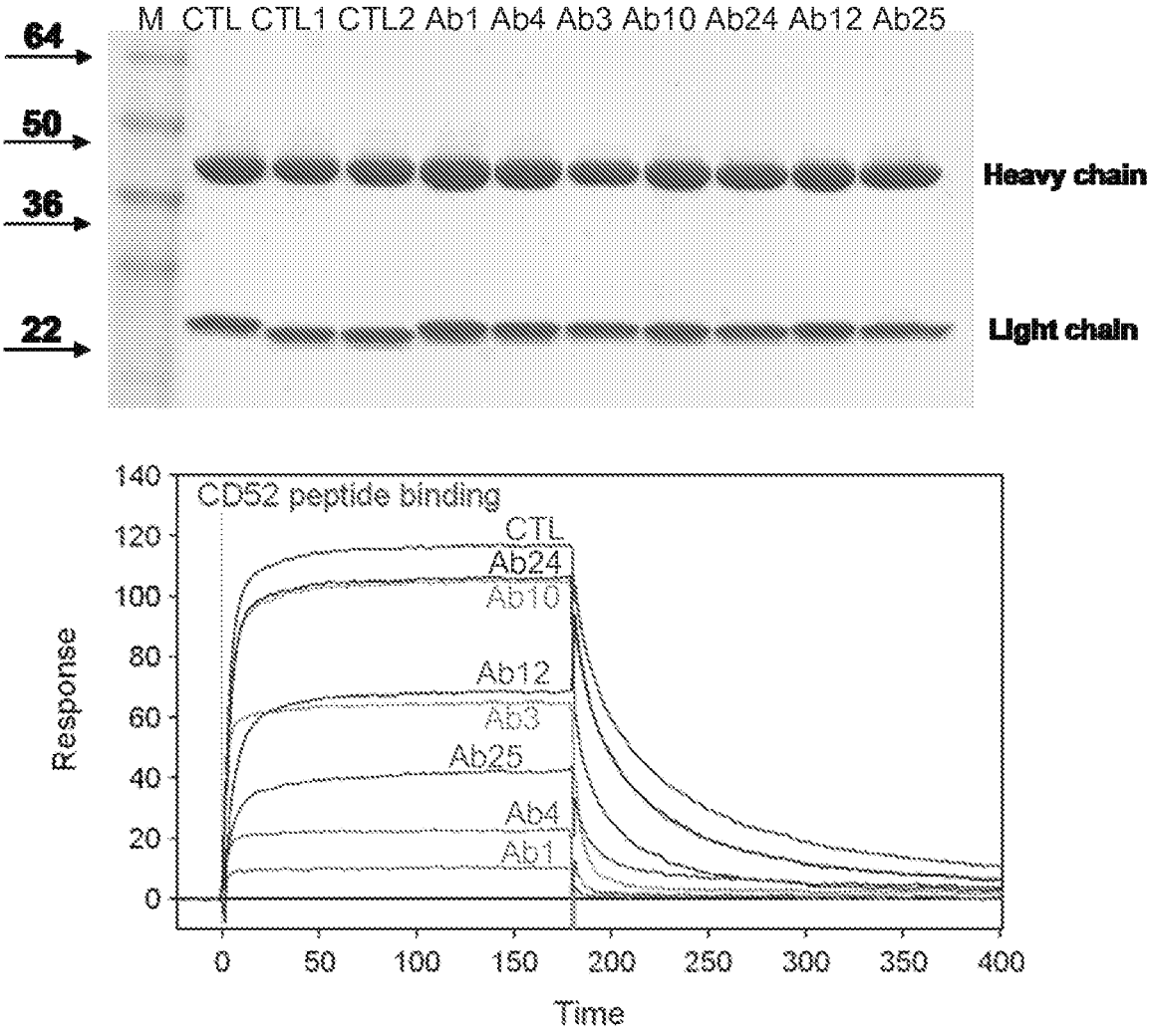

Light chain DNA
Heavy chain
Sub-cloning into expression vector
Co-transfection (HEK293) on a plate
3 ml media
Screening
• Expression level (protein A)
• Antigen binding (CD52 peptide)
Biacore CD52 Peptide Binding Normalized to Concentrations Determined by Biacore
Response
Time
Ab24
CTL
Ab10
Ab12
Ab25
Ab3
Ab4
Biacore CD52 Peptide Binding Normalized to Concentrations Determined by Octet
Response
Time
Ab24
CTL
Ab10
Ab12
Ab25
Ab3
Ab4

FIG. 2



Sample	Concentrations used for fit	k_{on} ($x10^6 M^{-1}s^{-1}$)	k_{off} ($x10^{-2}s^{-1}$)	R_{max} (RU)	K_D (nM)
CTL1	7.5nM – 0.2nM	6.1	1.5	92.7	2.4
CTL2	7.5nM – 0.2nM	4.9	1.4	86.6	2.8
Ab1	240nM – 1.9nM	1.1	42.1	71.8	366.0*
Ab4	240nM – 1.9nM	1.3	28.4	104.6	222.0*
Ab3	240nM – 0.4nM	3.1	19.8	135.9	65.8
Ab10	7.5nM – 0.2nM	3.8	1.9	83.7	5.0
Ab24	7.5nM – 0.2nM	3.4	1.9	87.9	5.6
Ab12	240nM – 0.4nM	1.1	4.5	118.2	39.8
Ab25	240nM – 0.4nM	0.7	7.3	119.6	110.9*

**note: for more accurate K_D, a higher concentration range should be used*

FIG. 3

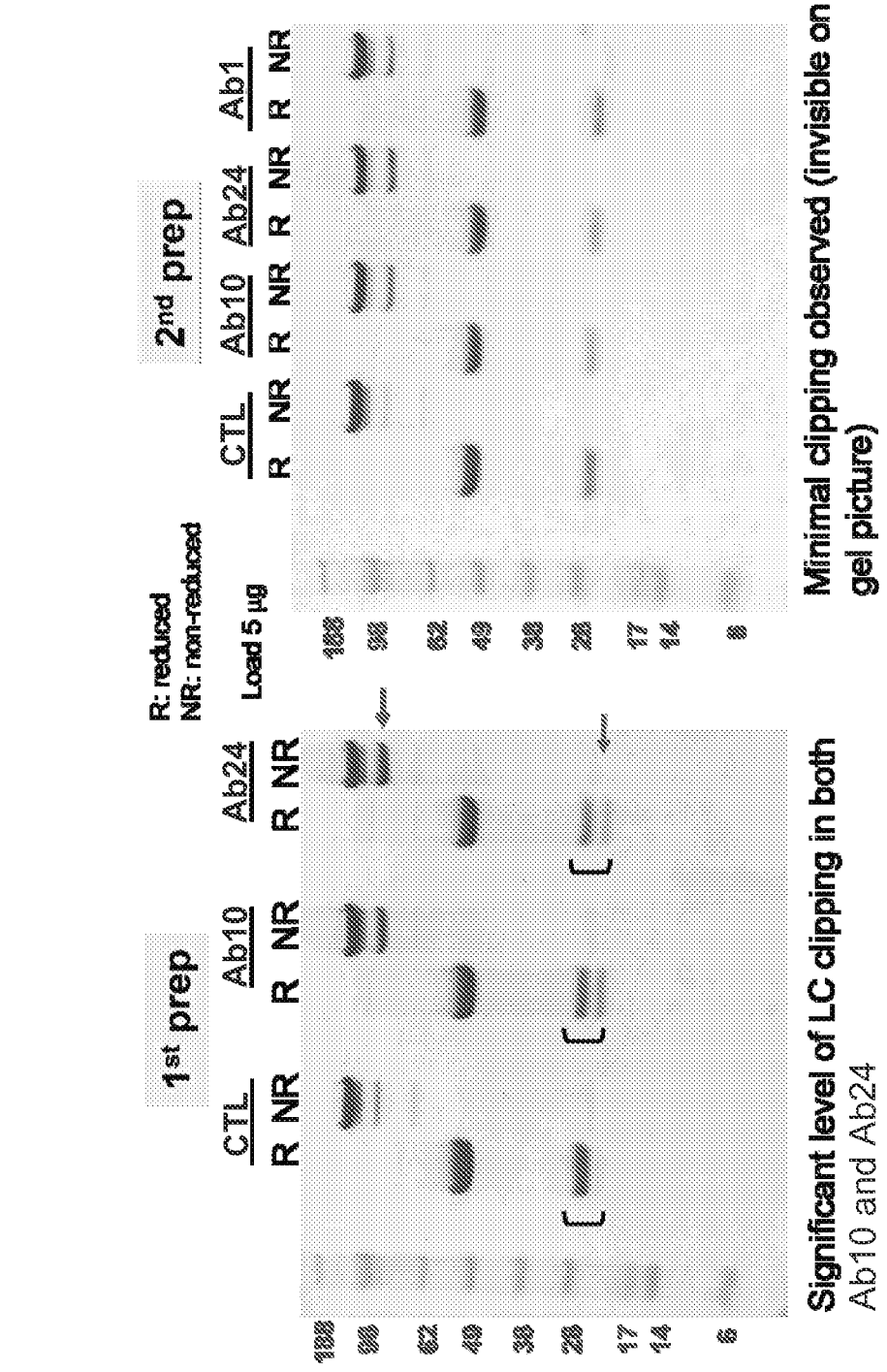
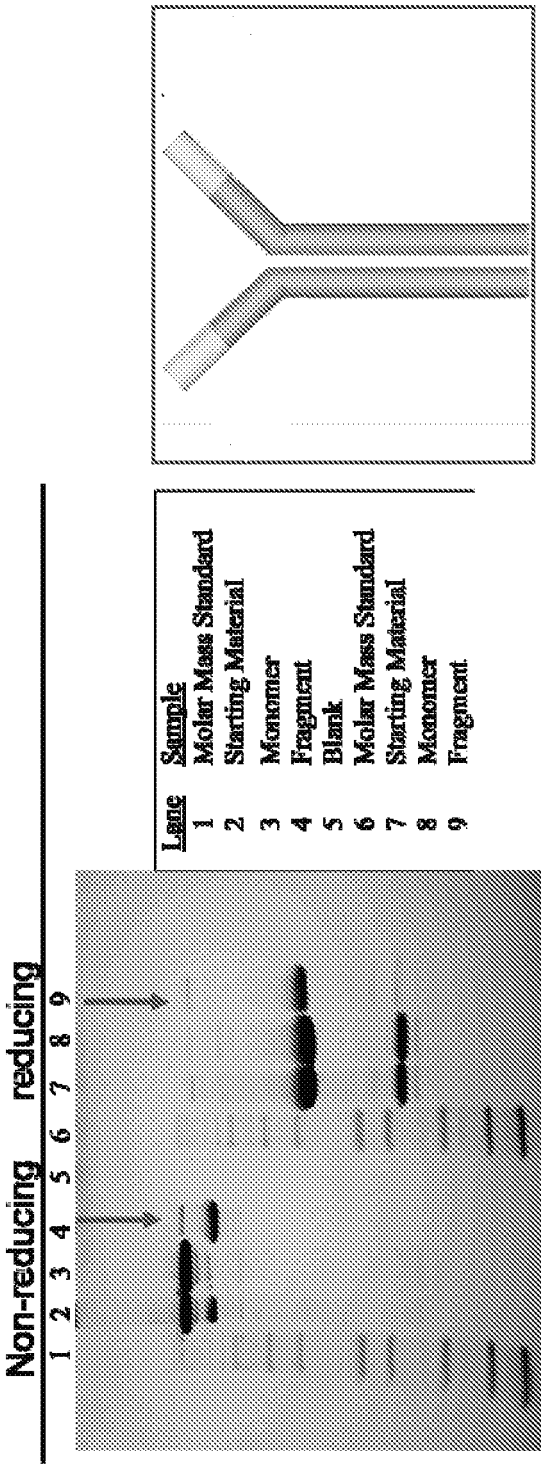

1st prep
2nd prep
CTL Ab10 Ab24
CTL Ab10 Ab24 Ab1
R NR R NR R NR
R NR R NR R NR R NR
R: reduced
NR: non-reduced
Load 5 µg
188
98
62
49
38
28
17
14
6
Significant level of LC clipping in both Ab10 and Ab24
Minimal clipping observed (invisible on gel picture)

FIG. 4



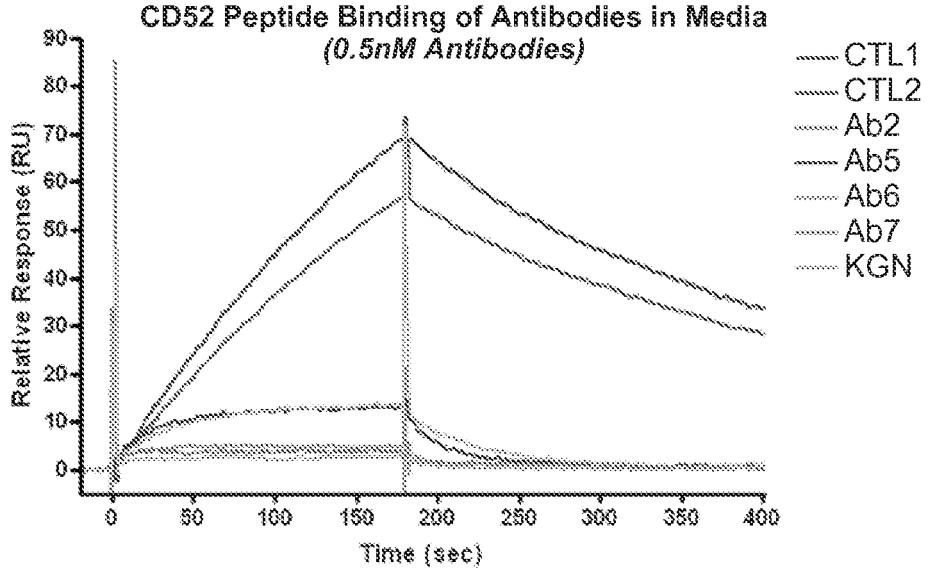
N-terminal sequencing

Sample	HC : LC
Starting Material	1.2 : 1
Monomer	1 : 1
Fragment	1 : 0

FIG. 5

Tier	Sample	Octet Conc (µg/ml)
2	Ab2	0.32
2	KGN	0.405
2	Ab22	0.327
2	Ab6	0.41
2	Ab7	0.328
2	Ab23	0.328
2	Ab5	0.347
	CTL	0.907

Tier	Sample	Octet Conc (µg/ml)
3	Ab13	0.254
3	Ab15	0.233
3	Ab11	0.655
3	Ab20	0.674
3	Ab19	2.085
3	Ab16	0.42
3	Ab18	0.149
3	Ab21	0.35
3	Ab17	0.207
3	Ab14	0.657



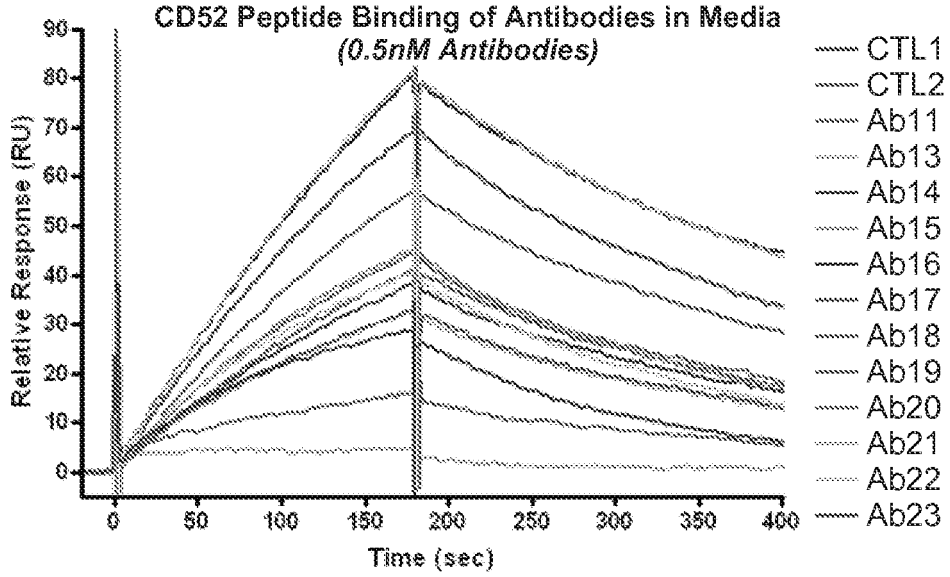
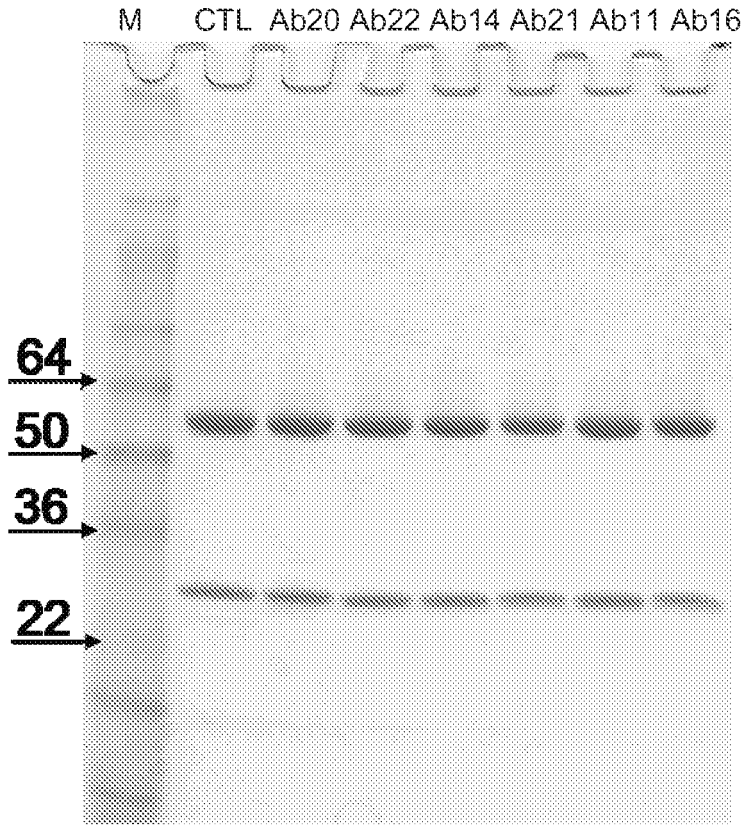


FIG. 6


M
CTL
Ab20
Ab22
Ab14
Ab21
Ab11
Ab16
64
50
36
22

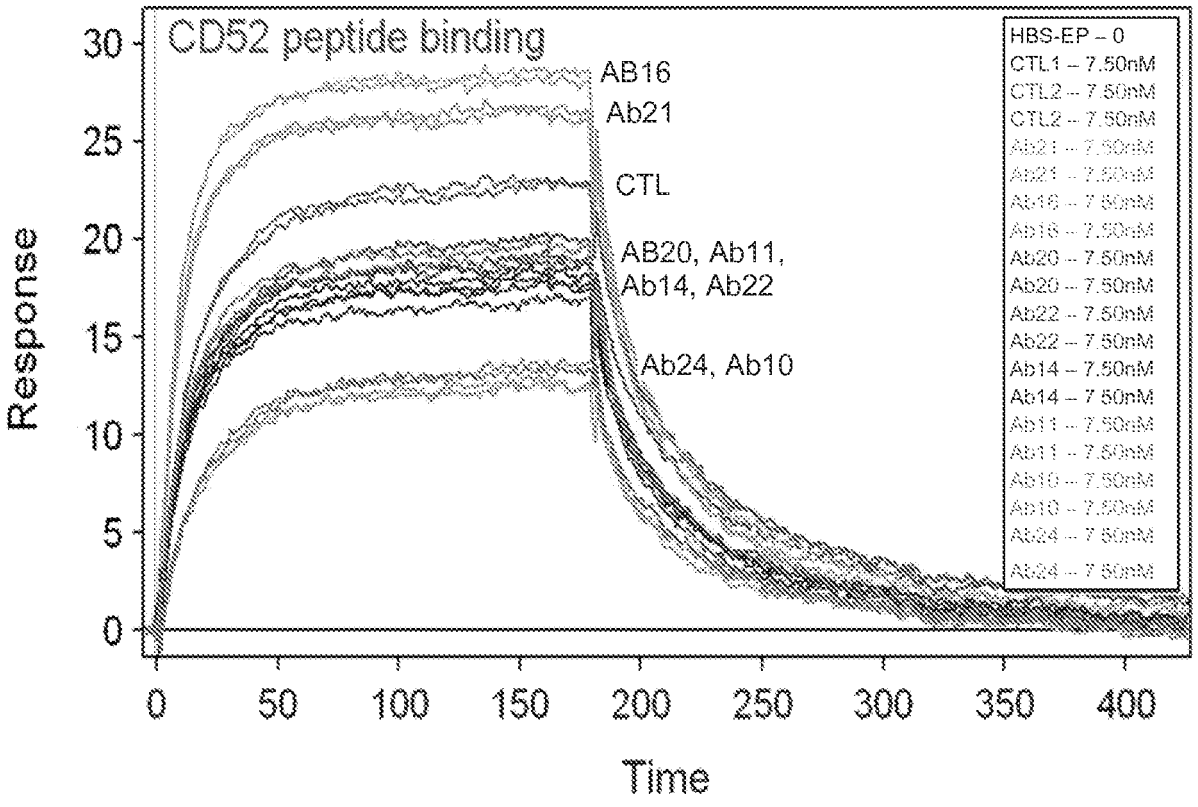

CD52 peptide binding
AB16
Ab21
CTL
AB20, Ab11,
Ab14, Ab22
Ab24, Ab10
HBS-EP – 0
CTL1 – 7.50nM
CTL2 – 7.50nM
CTL2 – 7.50nM
Ab21 – 7.50nM
Ab21 – 7.50nM
Ab16 – 7.50nM
Ab16 – 7.50nM
Ab20 – 7.50nM
Ab20 – 7.50nM
Ab22 – 7.50nM
Ab22 – 7.50nM
Ab14 – 7.50nM
Ab14 – 7.50nM
Ab11 – 7.50nM
Ab11 – 7.50nM
Ab10 – 7.50nM
Ab10 – 7.50nM
Ab24 – 7.50nM
Ab24 – 7.50nM
Response
Time
0
5
10
15
20
25
30
0
50
100
150
200
250
300
350
400

FIG. 7

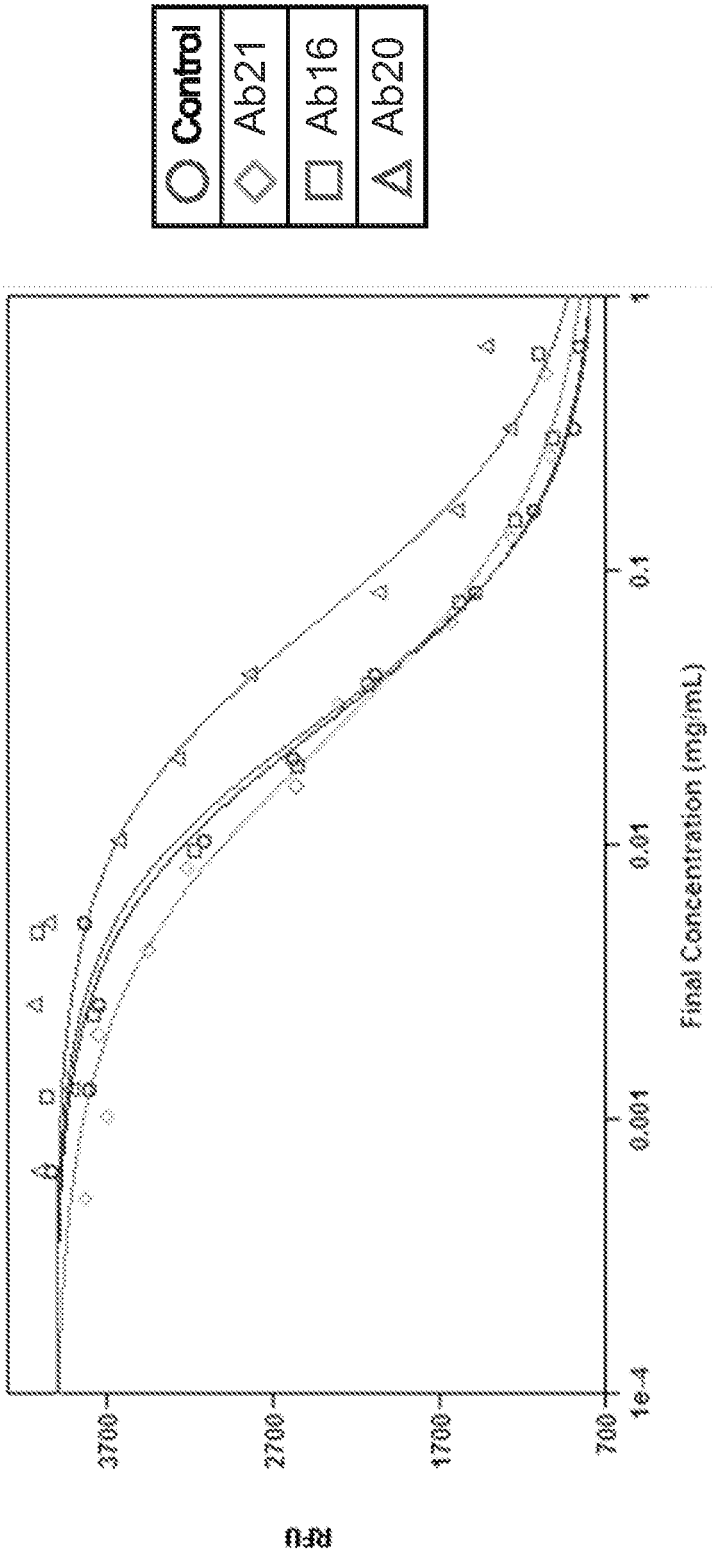

Control
Ab21
Ab16
Ab20
RFU
3700
2700
1700
700
1e-4
0.001
0.01
0.1
1
Final Concentration (mg/mL)

FIG. 8

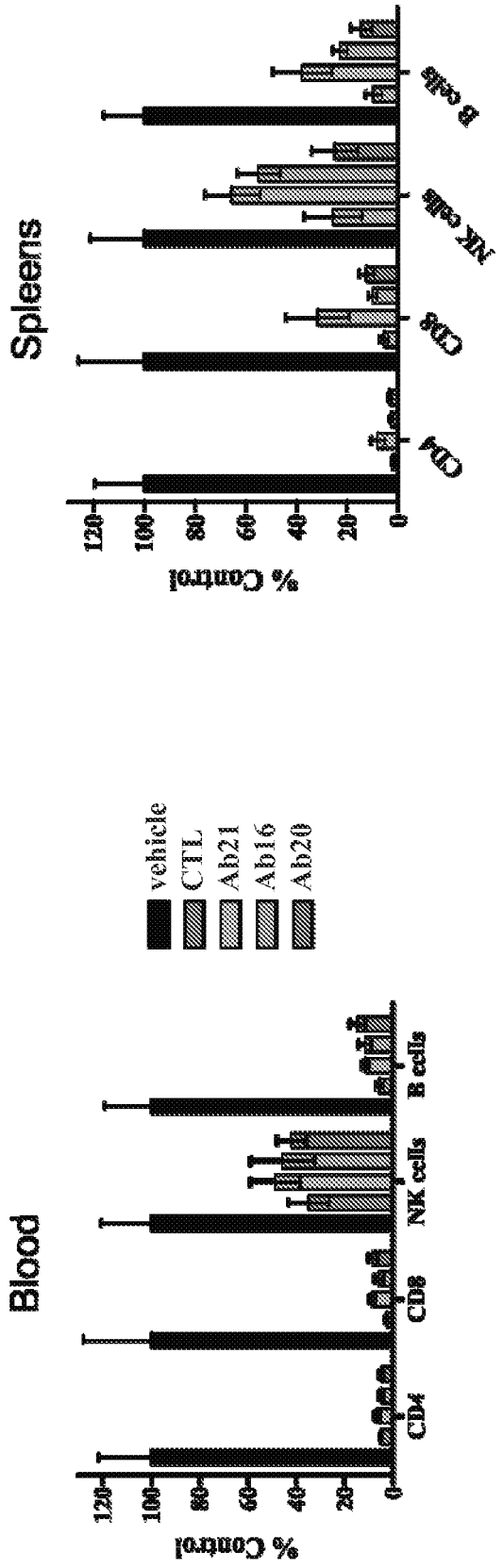

Spleens
% Control
120
100
80
60
40
20
0
CD4
CD8
NK cells
B cells
Blood
% Control
120
100
80
60
40
20
0
CD4
CD8
NK cells
B cells
vehicle
CTL
Ab21
Ab16
Ab20

FIG. 9

Human CD52 protein

MKRFLFLLLTISLLVMVQIQTGLSGQNDTSQTSSPSASSSMSGGIFLFFVANAIIHLF
CFS (SEQ ID NO: 1)

FIG. 10

Ab26, Ab1, Ab2, Ab3, Ab4, Ab5, Ab6, Ab7, Ab10, Ab11, Ab12, Ab13, Ab14, Ab15, Ab16, Ab17, Ab18, Ab19, Ab20, Ab21, Ab22, Ab23, Ab24, Ab25, and KGN full-length heavy chain amino acid sequence

MEAPAQLLFLLLLWLPDTTGEVQLVESGGGLVQPGGSLRLSCAASGFPFSNYWM
NWVRQAPGKGLEWVGQIRLKSNNYATHYAESVKGRFTISRDDSKNSLYLQMNS
LKTEDTAVYYCTPIDYWGQGTTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCL
VKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICN
VNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTP
EVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLH
QDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRDELTKNQVSL
TCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ
GNVFSCSVMHEALHNHYTQKSLSLSPGK (SEQ ID NO: 3)

Ab26 full-length light chain amino acid sequence

MEAPAQLLFLLLLWLPDTTGDIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNGKT
YLNWVLQKPGQSPQRLIYLVSKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVY
YCVQGSHFHTFGQGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPRE
AKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEV
THQGLSSPVTKSFNRGEC (SEQ ID NO: 4)

FIG. 11

Ab26, Ab1, Ab2, Ab3, Ab4, Ab5, Ab6, Ab7, Ab10, Ab11, Ab12, Ab13, Ab14, Ab15, Ab16, Ab17, Ab18, Ab19, Ab20, Ab21, Ab22, Ab23, Ab24, Ab25, and KGN full-length heavy chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGAGGTACAGCTGGTGGAGTCGGGAGGAGGCTTGGTA
CAGCCTGGGGGTTCTCTGAGACTCTCCTGTGCAGCTTCTGGATTCCCATT
CAGTAACTACTGGATGAACTGGGTCCGCCAGGCTCCAGGGAAGGGACTT
GAGTGGGTGGGTCAAATTAGATTGAAATCTAATAATTATGCAACACATTA
TGCGGAGTCTGTGAAAGGGCGGTTCACCATCTCCAGAGATGATTCCAAA
AACAGCCTCTATCTTCAAATGAATTCCCTGAAAACTGAAGACACTGCCGT
TTATTACTGTACCCCAATTGACTATTGGGGCCAAGGCACCACTGTCACAG
TCTCCTCAGCCTCCACCAAGGGCCCATCGGTCTTCCCCCTGGCACCCTCC
TCCAAGAGCACCTCTGGGGGTACAGCGGCCCTGGGCTGCCTGGTCAAGG
ACTACTTCCCCGAACCGGTGACGGTGTCGTGGAACTCAGGCGCCCTGAC
CAGCGGCGTGCACACCTTCCCGGCTGTCCTACAGTCCTCAGGACTCTACT
CCCTCAGCAGCGTGGTGACCGTGCCCTCCAGCAGCTTGGGCACCCAGAC
CTACATCTGCAACGTGAATCACAAGCCCAGCAACACCAAGGTGGACAAG
AAAGTTGAGCCCAAATCTTGTGACAAAACTCACACATGCCCACCGTGCCC
AGCACCTGAACTCCTGGGGGGACCGTCAGTCTTCCTCTTCCCCCCAAAAC
CCAAGGACACCCTCATGATCTCCCGGACCCCTGAGGTCACATGCGTGGT
GGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTCAACTGGTACGTG
GACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAG
TACAACAGCACGTACCGTGTGGTCAGCGTCCTCACCGTCCTGCACCAGG
ACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGCCCT
CCCAGCCCCCATCGAGAAAACCATCTCCAAAGCCAAAGGGCAGCCCCGA
GAACCACAGGTGTACACCCTGCCCCCATCCCGGGATGAGCTGACCAAGA
ACCAGGTCAGCCTGACATGCCTGGTCAAAGGCTTCTATCCCAGCGACAT
CGCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACTACAAGAC
CACGCCTCCCGTGCTGGACTCCGACGGCTCCTTCTTCCTCTACAGCAAGC
TCACCGTGGACAAGTCCAGGTGGCAGCAGGGGAACGTCTTCTCATGCTC
CGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAAGAGCCTCTCC
CTGTCTCCGGGTAAATGATGA (SEQ ID NO: 5)

FIG. 11 (cont'd)

Ab26 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATGGAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 6)

Ab1 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTGATGGAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 112)

FIG. 11 (cont'd)

Ab2 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTCACGGAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 113)

Ab3 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAAAGGAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 114)

FIG. 11 (cont'd)

Ab4 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTCAAGGAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 115)

Ab5 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTCGCGGAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 116)

FIG. 11 (cont'd)

Ab6 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTACCGGAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 117)

Ab7 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTTATGGAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 118)

FIG. 11 (cont'd)

Ab10 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATGCAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 119)

Ab11 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATGATAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 120)

FIG. 11 (cont'd)

Ab12 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATGAAAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 121)

Ab13 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATTTTAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 122)

FIG. 11 (cont'd)

Ab14 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATCATAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 123)

Ab15 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATATTAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 124)

FIG. 11 (cont'd)

Ab16 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATAAGAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 125)

Ab17 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATTTGAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 126)

FIG. 11 (cont'd)

Ab18 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATGATAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 127)

Ab19 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATAATAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 128)

FIG. 11 (cont'd)

Ab20 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATCAGAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 129)

Ab21 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATCGTAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 130)

FIG. 11 (cont'd)

Ab22 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATAGTAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 131)

Ab23 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATACCAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 132)

FIG. 11 (cont'd)

Ab24 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATTTGAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 133)

Ab25 full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAATGTTAAAACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 134)

FIG. 11 (cont'd)

KGN full-length light chain nucleic acid sequence

CCCACCATGGAAGCCCCAGCGCAGCTTCTCTTCCTCCTGCTACTCTGGCTCCC
TGATACCACCGGAGACATTGTGATGACCCAGACTCCACTCAGTTTGTCAG
TTACCCCTGGGCAACCAGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTC
TTATATAGTAAAGGAAATACCTATTTGAACTGGGTTTTACAGAAGCCAGG
CCAGTCTCCACAGCGCCTAATCTATCTGGTGTCTAAACTGGACTCTGGAG
TCCCTGACAGGTTCTCTGGCAGTGGATCAGGAACAGATTTTACACTGAAA
ATCAGCAGAGTGGAGGCTGAGGATGTGGGAGTTTATTACTGCGTGCAAG
GTTCACATTTTCACACGTTCGGTCAAGGGACCAAGCTGGAGATTAAACGA
ACTGTGGCAGCACCAAGCGTCTTCATCTTCCCGCCATCTGATGAGCAGTT
GAAATCTGGAACTGCCTCTGTTGTGTGCCTGCTGAATAACTTCTATCCCA
GAGAGGCCAAAGTACAGTGGAAGGTGGATAACGCCCTCCAATCGGGTAA
CTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGGACAGCACCTACAGC
CTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACACAAAG
TCTACGCCTGCGAAGTCACCCATCAGGGCCTGAGCTCGCCCGTCACAAA
GAGCTTCAACAGGGGAGAGTGTTAGTGA (SEQ ID NO: 135)

FIG. 12

Ab26, Ab1, Ab2, Ab3, Ab4, Ab5, Ab6, Ab7, Ab10, Ab11, Ab12, Ab13, Ab14, Ab15, Ab16, Ab17, Ab18, Ab19, Ab20, Ab21, Ab22, Ab23, Ab24, and Ab25 H-CDR1 amino acid sequence

GFPFSNYWMN (SEQ ID NO: 7)

Ab26, Ab1, Ab2, Ab3, Ab4, Ab5, Ab6, Ab7, Ab10, Ab11, Ab12, Ab13, Ab14, Ab15, Ab16, Ab17, Ab18, Ab19, Ab20, Ab21, Ab22, Ab23, Ab24, and Ab25 H-CDR2 amino acid sequence

QIRLKSNNYATHYAESVKG (SEQ ID NO: 8)

Ab26, Ab1, Ab2, Ab3, Ab4, Ab5, Ab6, Ab7, Ab10, Ab11, Ab12, Ab13, Ab14, Ab15, Ab16, Ab17, Ab18, Ab19, Ab20, Ab21, Ab22, Ab23, Ab24, and Ab25 H-CDR3 amino acid sequence

TPIDY (SEQ ID NO: 9)

Ab26, Ab1, Ab2, Ab3, Ab4, Ab5, Ab6, Ab7, Ab10, Ab11, Ab12, Ab13, Ab14, Ab15, Ab16, Ab17, Ab18, Ab19, Ab20, Ab21, Ab22, Ab23, Ab24, and Ab25 L-CDR2 amino acid sequence

LVSKLDS (SEQ ID NO: 34)

Ab26, Ab1, Ab2, Ab3, Ab4, Ab5, Ab6, Ab7, Ab10, Ab11, Ab12, Ab13, Ab14, Ab15, Ab16, Ab17, Ab18, Ab19, Ab20, Ab21, Ab22, Ab23, Ab24, and Ab25 L-CDR3 amino acid sequence

VQGSHFHT (SEQ ID NO: 35)

FIG. 13

Antibody	L-CDR1	SEQ ID NO
Ab1	KSSQSLLYSDGKTYLN	11
Ab2	KSSQSLLYSHGKTYLN	12
Ab3	KSSQSLLYSKGKTYLN	13
Ab4	KSSQSLLYSQGKTYLN	14
Ab5	KSSQSLLYSRGKTYLN	15
Ab6	KSSQSLLYSTGKTYLN	16
Ab7	KSSQSLLYSYGKTYLN	17
Ab10	KSSQSLLYSNAKTYLN	18
Ab11	KSSQSLLYSNDKTYLN	19
Ab12	KSSQSLLYSNEKTYLN	20
Ab13	KSSQSLLYSNFKTYLN	21
Ab14	KSSQSLLYSNHKTYLN	22
Ab15	KSSQSLLYSNIKTYLN	23
Ab16	KSSQSLLYSNKKTYLN	24
Ab17	KSSQSLLYSNLKTYLN	25
Ab18	KSSQSLLYSNMKTYLN	26
Ab19	KSSQSLLYSNNKTYLN	27
Ab20	KSSQSLLYSNQKTYLN	28
Ab21	KSSQSLLYSNRKTYLN	29
Ab22	KSSQSLLYSNSKTYLN	30
Ab23	KSSQSLLYSNTKTYLN	31
Ab24	KSSQSLLYSNVKTYLN	32
Ab25	KSSQSLLYSNYKTYLN	33
Ab26	KSSQSLLYSNGKTYLN	10

FIG. 14

Ab1 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSDGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 36)

Ab2 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSHGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 37)

Ab3 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSKGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 38)

Ab4 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSQGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 39)

Ab5 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSRGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 40)

FIG. 14 (cont'd)

Ab6 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSTGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 41)

Ab7 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSYGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 42)

Ab10 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNAKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 43)

Ab11 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNDKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 44)

Ab12 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNEKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 45)

FIG. 14 (cont'd)

Ab13 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNFKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 46)

Ab14 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNHKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 47)

Ab15 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNIKTYLNWVLQKPGQSPQRLIYLVS
KLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIKR
TVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESV
TEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC (SEQ
ID NO: 48)

Ab16 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNKKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 49)

Ab17 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNLKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 50)

FIG. 14 (cont'd)

Ab18 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNMKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 51)

Ab19 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNNKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 52)

Ab20 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNQKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 53)

Ab21 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNRKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 54)

Ab22 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNSKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 55)

FIG. 14 (cont'd)

Ab23 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNTKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 56)

Ab24 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNVKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 57)

Ab25 full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNYKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 58)

KGN full-length light chain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSKGNTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
(SEQ ID NO: 2)

FIG. 15

Ab26, Ab1, Ab2, Ab3, Ab4, Ab5, Ab6, Ab7, Ab10, Ab11, Ab12, Ab13, Ab14, Ab15, Ab16, Ab17, Ab18, Ab19, Ab20, Ab21, Ab22, Ab23, Ab24, and Ab25 heavy chain variable domain amino acid sequence

EVQLVESGGGLVQPGGSLRLSCAASGFPFSNYWMNWVRQAPGKGLEWVGQIRL KSNNYATHYAESVKGRFTISRDDSKNSLYLQMNSLKTEDTAVYYCTPIDYWGQG TTVTVSS (SEQ ID NO: 59)

Ab26 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNGKTYLNWVLQKPGQSPQRLIYLV SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK (SEQ ID NO: 60)

Ab1 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSDGKTYLNWVLQKPGQSPQRLIYLV SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK (SEQ ID NO: 61)

Ab2 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSHGKTYLNWVLQKPGQSPQRLIYLV SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK (SEQ ID NO: 62)

Ab3 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSKGKTYLNWVLQKPGQSPQRLIYLV SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK (SEQ ID NO: 63)

Ab4 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSQGKTYLNWVLQKPGQSPQRLIYLV SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK (SEQ ID NO: 64)

FIG. 15 (cont'd)

Ab5 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSRGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 65)

Ab6 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSTGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 66)

Ab7 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSYGKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 67)

Ab10 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNAKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 68)

Ab11 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNDKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 69)

Ab12 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNEKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 70)

FIG. 15 (cont'd)

Ab13 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNFKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 71)

Ab14 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNHKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 72)

Ab15 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNIKTYLNWVLQKPGQSPQRLIYLVS
KLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 73)

Ab16 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNKKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 74)

Ab17 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNLKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 75)

Ab18 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNMKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 76)

Ab19 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNNKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 77)

FIG. 15 (cont'd)

Ab20 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNQKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 78)

Ab21 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNRKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 79)

Ab22 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNSKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 80)

Ab23 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNTKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 81)

Ab24 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNVKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 82)

Ab25 light chain variable domain amino acid sequence

DIVMTQTPLSLSVTPGQPASISCKSSQSLLYSNYKTYLNWVLQKPGQSPQRLIYLV
SKLDSGVPDRFSGSGSGTDFTLKISRVEAEDVGVYYCVQGSHFHTFGQGTKLEIK
(SEQ ID NO: 83)

FIG. 16

Ab26, Ab1, Ab2, Ab3, Ab4, Ab5, Ab6, Ab7, Ab10, Ab11, Ab12, Ab13, Ab14, Ab15, Ab16, Ab17, Ab18, Ab19, Ab20, Ab21, Ab22, Ab23, Ab24, Ab25, and KGN heavy chain variable domain nucleic acid sequence

GAGGTACAGCTGGTGGAGTCGGGAGGAGGCTTGGTACAGCCTGGGGGTTCTC
TGAGACTCTCCTGTGCAGCTTCTGGATTCCCATTCAGTAACTACTGGATGAAC
TGGGTCCGCCAGGCTCCAGGGAAGGGACTTGAGTGGGTGGGTCAAATTAGAT
TGAAATCTAATAATTATGCAACACATTATGCGGAGTCTGTGAAAGGGCGGTT
CACCATCTCCAGAGATGATTCCAAAAACAGCCTCTATCTTCAAATGAATTCCC
TGAAAACTGAAGACACTGCCGTTTATTACTGTACCCCAATTGACTATTGGGGC
CAAGGCACCACTGTCACAGTCTCCTCA (SEQ ID NO: 84)

Ab26 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATGGAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 85)

Ab1 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTGATGGAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 88)

Ab2 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTCACGGAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 89)

FIG. 16 (cont'd)

Ab3 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAAAGGAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 90)

Ab4 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTCAAGGAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 91)

Ab5 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTCGCGGAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 92)

Ab6 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTACCGGAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 93)

FIG. 16 (cont'd)

Ab7 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTTATGGAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 94)

Ab10 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATGCAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 95)

Ab11 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATGATAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 96)

Ab12 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATGAAAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 97)

FIG. 16 (cont'd)

Ab13 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATTTTAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 98)

Ab14 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATCATAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 99)

Ab15 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATATTAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 100)

Ab16 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATAAGAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 101)

FIG. 16 (cont'd)

Ab17 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATTTGAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 102)

Ab18 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATGATAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 103)

Ab19 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATAATAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 104)

Ab20 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATCAGAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 105)

FIG. 16 (cont'd)

Ab21 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATCGTAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 106)

Ab22 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATAGTAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 107)

Ab23 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATACCAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 108)

Ab24 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATTTGAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 109)

FIG. 16 (cont'd)

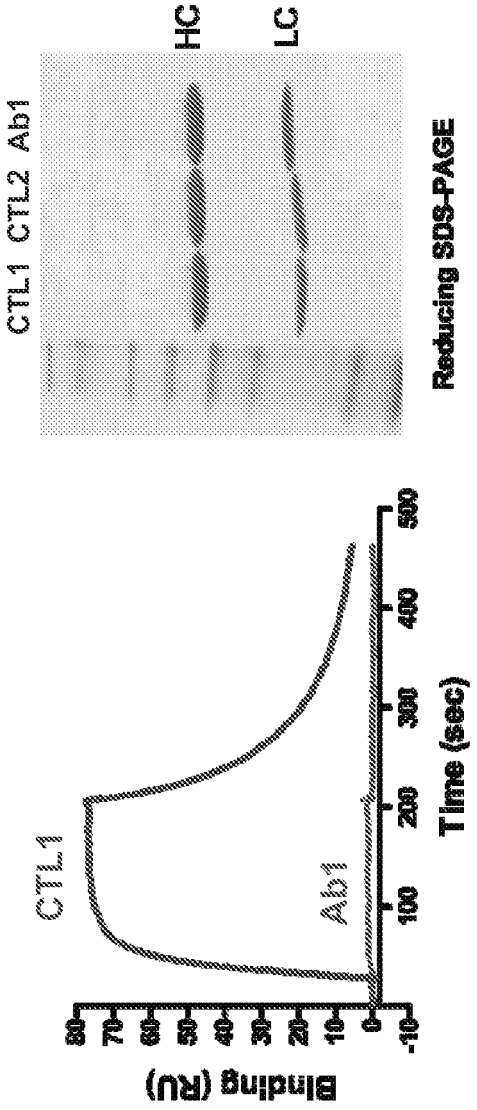
Ab25 light chain variable domain nucleic acid sequence

GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAATGTTAAAA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 110)

KGN light chain variable domain nucleic acid sequence

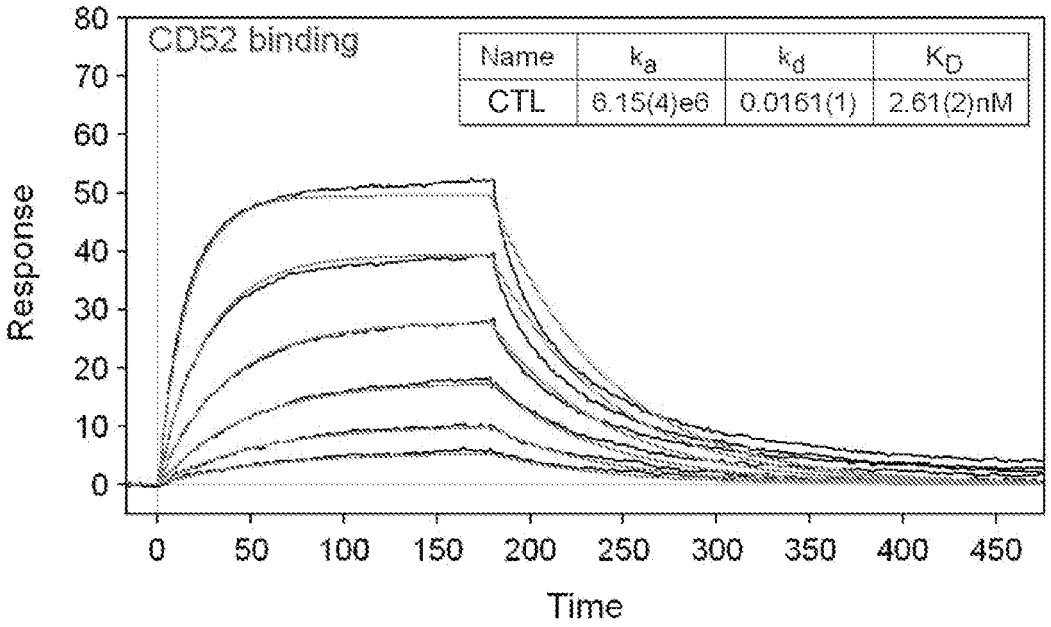
GACATTGTGATGACCCAGACTCCACTCAGTTTGTCAGTTACCCCTGGGCAACC
AGCCTCTATCTCTTGCAAGTCAAGTCAGAGCCTCTTATATAGTAAAGGAAATA
CCTATTTGAACTGGGTTTTACAGAAGCCAGGCCAGTCTCCACAGCGCCTAATC
TATCTGGTGTCTAAACTGGACTCTGGAGTCCCTGACAGGTTCTCTGGCAGTGG
ATCAGGAACAGATTTTACACTGAAAATCAGCAGAGTGGAGGCTGAGGATGTG
GGAGTTTATTACTGCGTGCAAGGTTCACATTTTCACACGTTCGGTCAAGGGAC
CAAGCTGGAGATTAAA (SEQ ID NO: 111)

FIG. 17



	K_D (nM)
CTL1	1.7
CTL2	2.2
Ab1	1480

FIG. 18


CD52 binding
Name | k_a | k_d | K_D
CTL | 6.15(4)e6 | 0.0161(1) | 2.61(2)nM
Response
Time
0
10
20
30
40
50
60
70
80
0
50
100
150
200
250
300
350
400
450

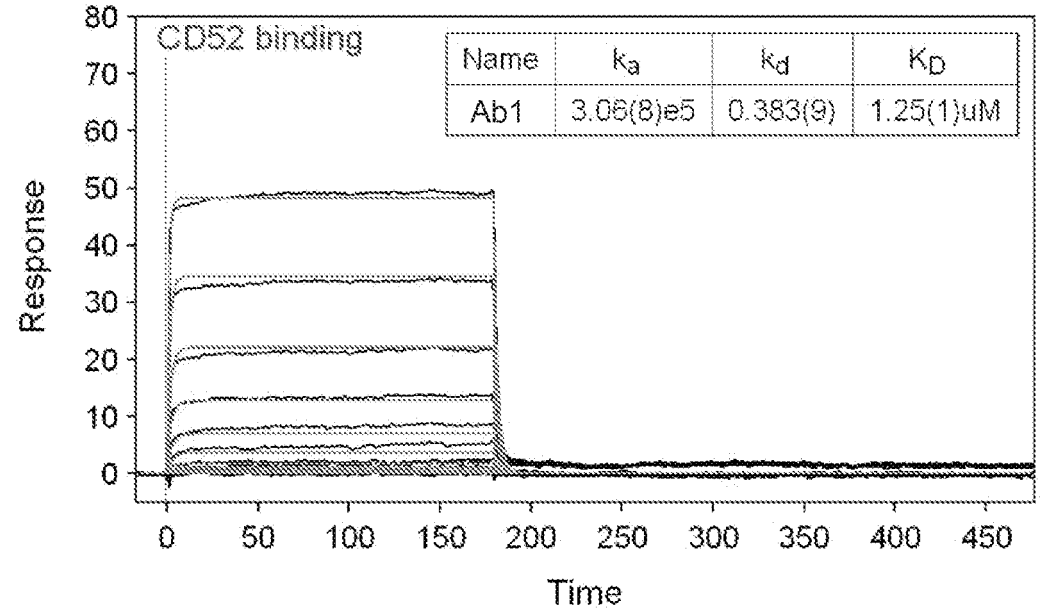

CD52 binding
Name | k_a | k_d | K_D
Ab1 | 3.06(8)e5 | 0.383(9) | 1.25(1)uM
Response
Time
0
10
20
30
40
50
60
70
80
0
50
100
150
200
250
300
350
400
450

FIG. 19

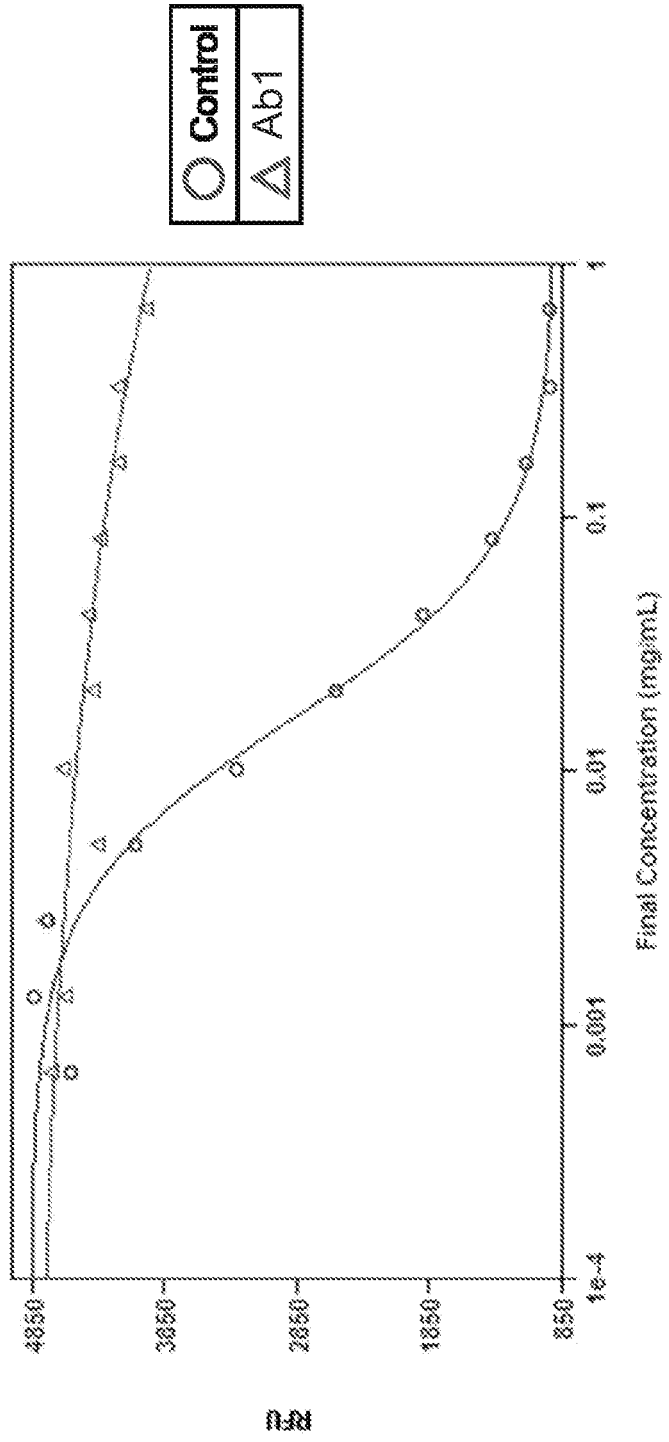
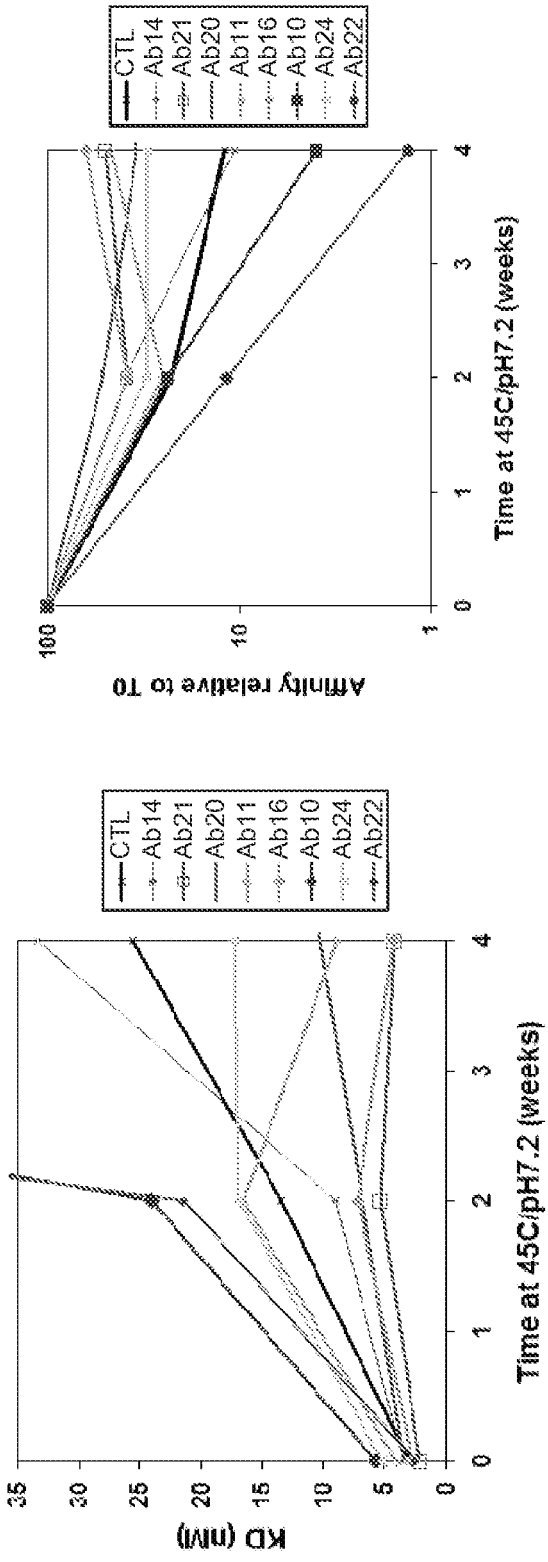

Control
Ab1
RFU
4050
3450
2850
1850
850
1e-4
0.001
0.01
0.1
1
Final Concentration (mg/mL)

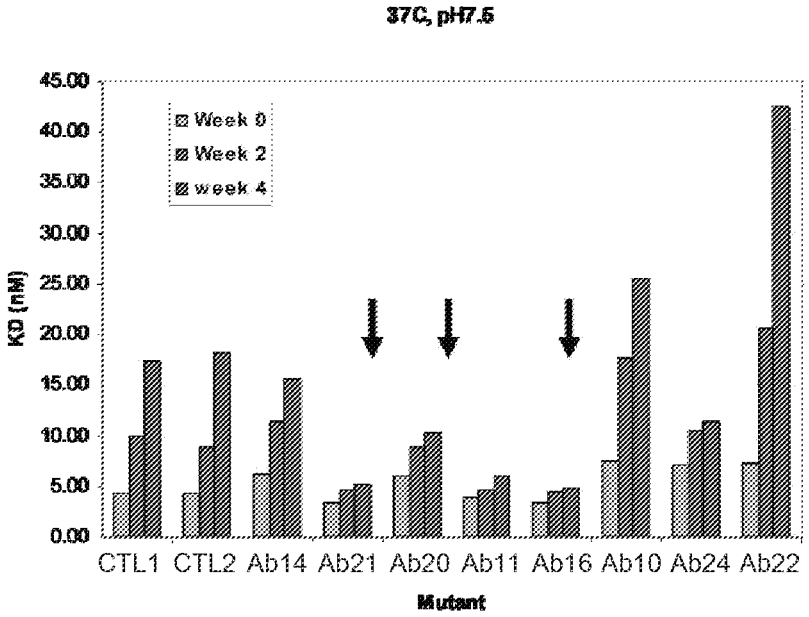
FIG. 20

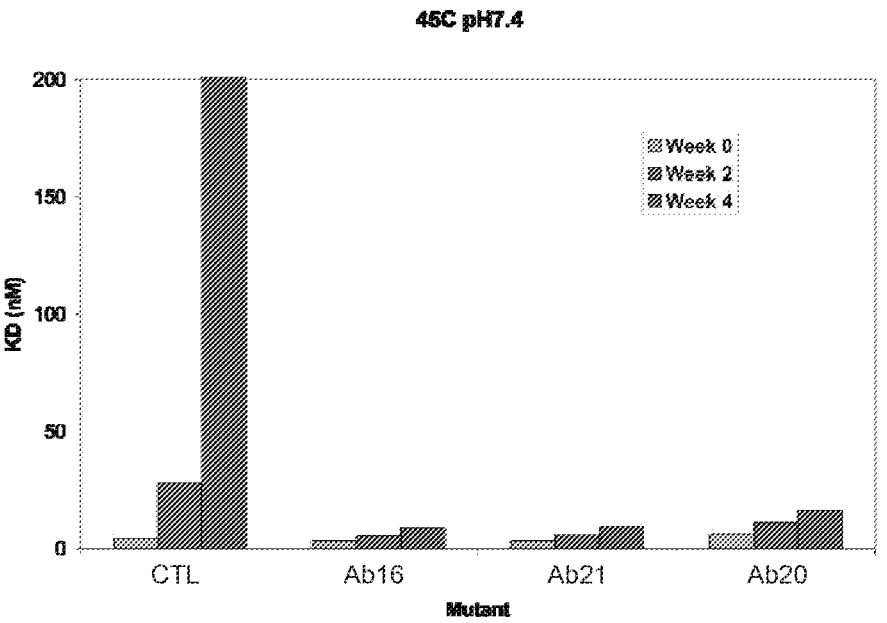


	KD		
Weeks	0	2	4
CTL	3.00	13.41	25.45
Ab14	3.50	8.97	33.26
Ab21	2.05	5.32	4.15
Ab20	3.49	6.8	10.18
Ab11	4.12	16.54	8.85
Ab16	2.77	7.17	4.33
Ab10	5.63	24.01	143.68
Ab24	5.15	16.87	17.25
Ab22	2.44	21.36	187

		%T0	
weeks	0	2	4
CTL	100.00	22.36	11.78
Ab14	100.00	39.07	10.54
Ab21	100.00	38.54	49.40
Ab20	100.00	51.37	34.31
Ab11	100.00	24.89	46.53
Ab16	100.00	38.60	63.91
Ab10	100.00	23.46	3.92
Ab24	100.00	30.51	29.84
Ab22	100.00	11.44	1.31

FIG. 21





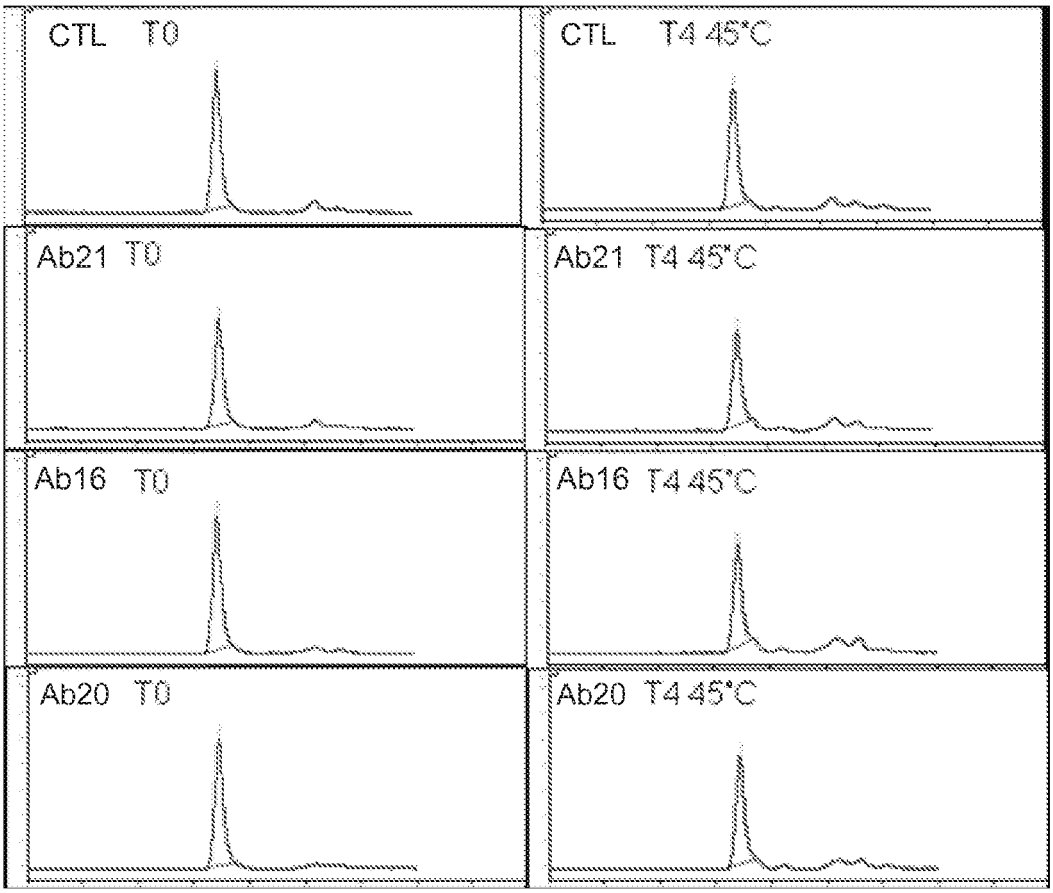
Affinity (KD in nM) after 37C incubation

	T0	Week 2	Week 4
CTL1	4.30	10	17.4
CTL2	4.20	8.9	18.3
Ab14	6.20	11.3	15.6
Ab21	3.30	4.6	5.1
Ab20	6.10	8.8	10.2
Ab16	3.30	4.5	4.8
Ab10	7.40	17.7	25.6
Ab24	7.00	10.5	11.3
Ab22	7.30	20.5	42.5

Affinity (KD in nM) after 45C incubation

	T0	Week 2	Week 4
CTL	4.30	28	1230
Ab16	3.30	5.3	8.9
Ab21	3.30	5.8	9.3
Ab20	6.10	11.3	16.1

FIG. 22


CTL T0
CTL T4 45°C
Ab21 T0
Ab21 T4 45°C
Ab16 T0
Ab16 T4 45°C
Ab20 T0
Ab20 T4 45°C