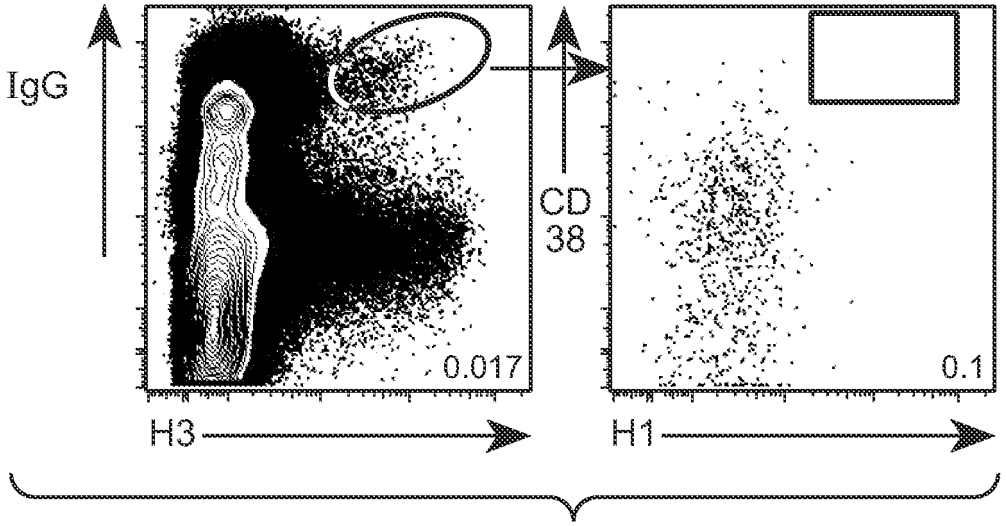

IgG
CD 38
0.017
0.1
H3
H1

FIG. 1A

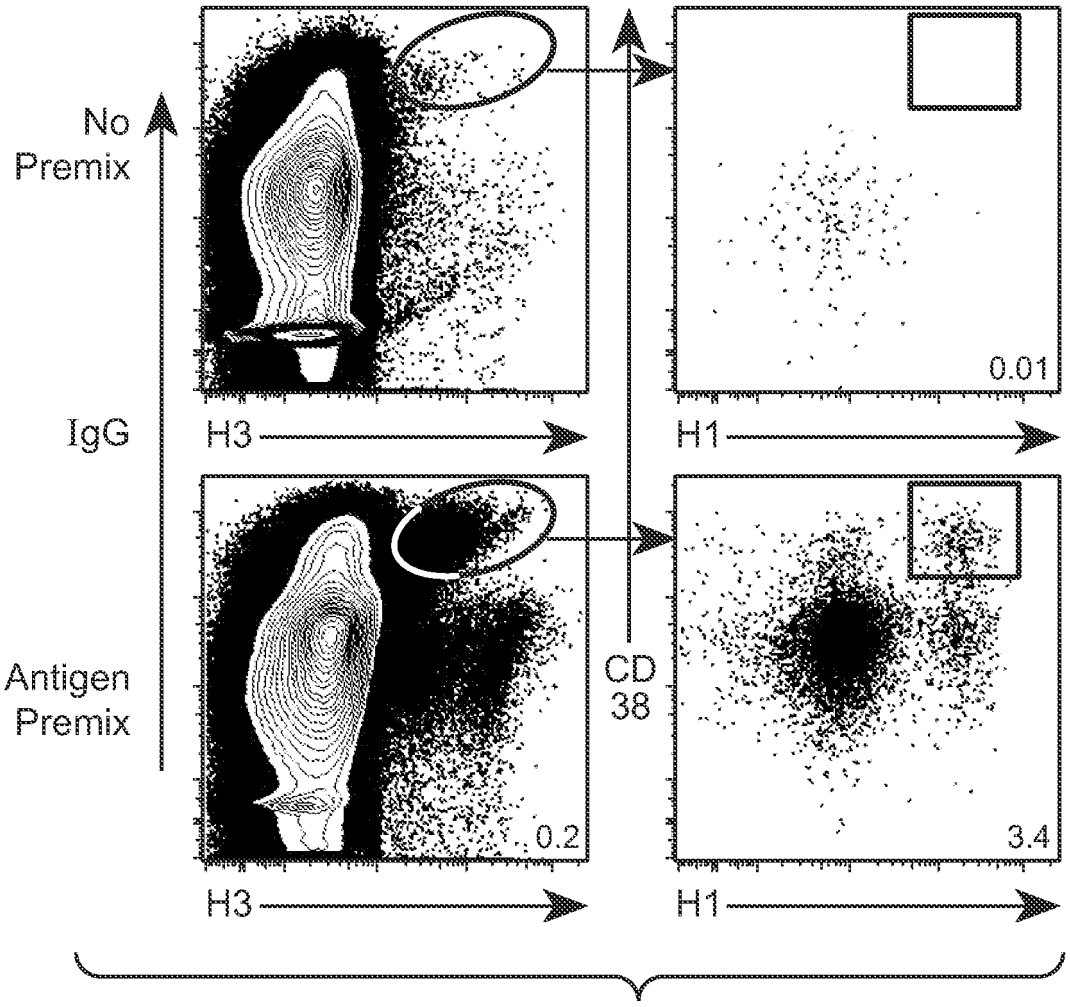

No Premix
IgG
Antigen Premix
CD 38
0.01
0.2
3.4
H3
H1
H3
H1

FIG. 1B

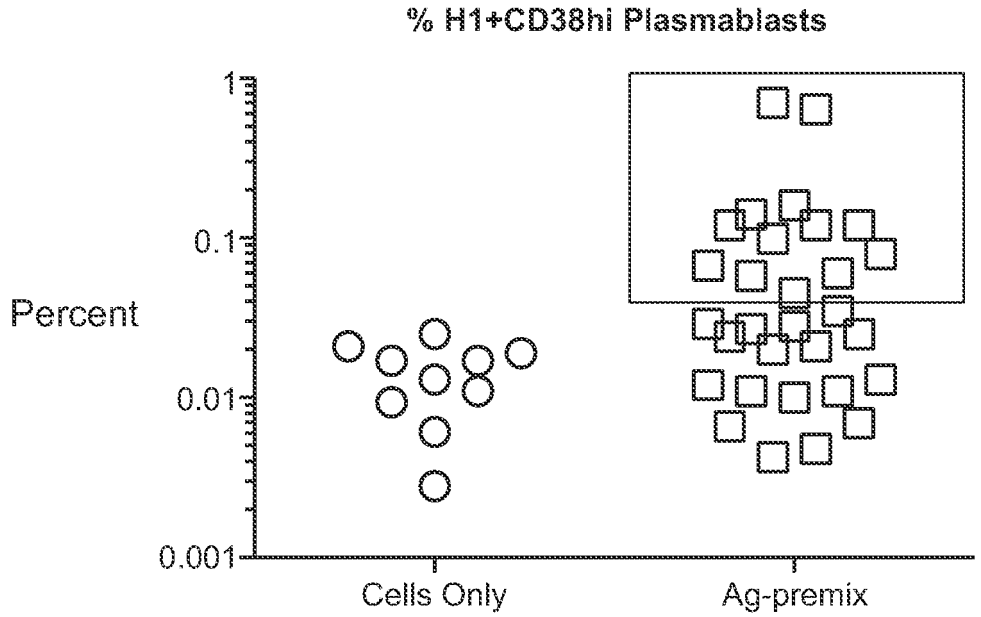

% H1+CD38hi Plasmablasts
Percent
1
0.1
0.01
0.001
Cells Only
Ag-premix

FIG. 2

		37.18		39.29		81.39		36.89		mAb 9		mAb 23	
Influenza Strain	HA Subtype	IC50 (nM)	95% CI(nM)	IC50 (nM)	95% CI(nM)	IC50 (nM)	95% CI(nM)	IC50 (nM)	95% CI(nM)	IC50 (nM)	95% CI(nM)	IC50 (nM)	95% CI(nM)
A/CA/7/2009	H1	1.1	0.75 - 1.6	2.5	2.0 - 3.1	2.1	1.1 - 3.8	NA	NA	NA	NA	NA	NA
A/Brisbane/59/2007	H1	2.3	1.8 - 3.0	1.9	1.2 - 2.9	0.65	0.46 - 0.94	NA	NA	NA	NA	NA	NA
A/Soiomon/3/2006	H1	8.0	3.9 - 16.6	25.1	20.1 - 31.4	14.6a	12.3 - 17.4	NA	NA	NA	NA	NA	NA
A/New Caldonia/20/1999	H1	3.1	1.3 - 7.4	9.2	5.7 - 15.0	6.1	4.7 - 7.9	NA	NA	NA	NA	NA	NA
A/PR/8/1934	H1	1.2	0.81 - 1.9	2.0	1.3 - 3.3	1.9	1.2 - 3.2	NA	NA	NA	NA	NA	NA
A/Japan/305/1957	H2	2.4	1.4 - 4.1	6.0	4.4 - 8.1	3.7	2.4 - 5.6	NA	NA	NA	NA	NA	NA
A/Victoria/361/2011	H3	NA	NA	3.4	2.4 - 4.8	3.6	2.4 - 5.3	9.7	8.0 - 11.9	41.0	26.3 - 64.1	12.0	7.2 - 20.2
A/Perth/16/2009	H3	NA	NA	3.0	2.4 - 3.8	1.6	1.2 - 2.0	1.1	0.86 - 1.5	13.5	10.4 - 17.5	4.2	3.3 - 5.4
A/Brisbane/10/2007	H3	NA	NA	2.3	2.0 - 2.7	1.9	1.7 - 2.2	1.9	1.5 - 2.4	26.1	18.2 - 37.4	6.3	4.6 - 8.0
A/Wisconsin/67/2005	H3	NA	NA	1.3	0.88 - 1.8	0.81	0.64 - 1.0	1.6	0.81 - 3.3	7.3	4.5 - 11.9	0.85	0.58 - 1.3
A/Victoria/3/1975	H3	NA	NA	2.5	1.9 - 3.4	2.8	2.2 - 3.7	2.2	0.94 - 5.0	17.2	9.3 - 31.9	3.7	2.3 - 6.0
A/Port Chalmers/1/1973	H3	NA	NA	2.2	1.6 - 3.1	1.5	1.1 - 1.9	1.9	0.75 - 4.6	18.4	12.5 - 26.9	2.4	1.5 - 3.8
A/HK/8/1968	H3	NA	NA	45.1	25.7 - 79.2	26.3	14.5 - 47.8	34.7	19.8 - 60.7	843	295 - 2406	336	240 - 470
A/Aichi/2/1968	H3	NA	NA	35.0	21.1 - 58.0	7.3	3.7 - 14.1	13.9	8.2 - 23.4	1172	589 - 2330	271	176 - 419

FIG. 3

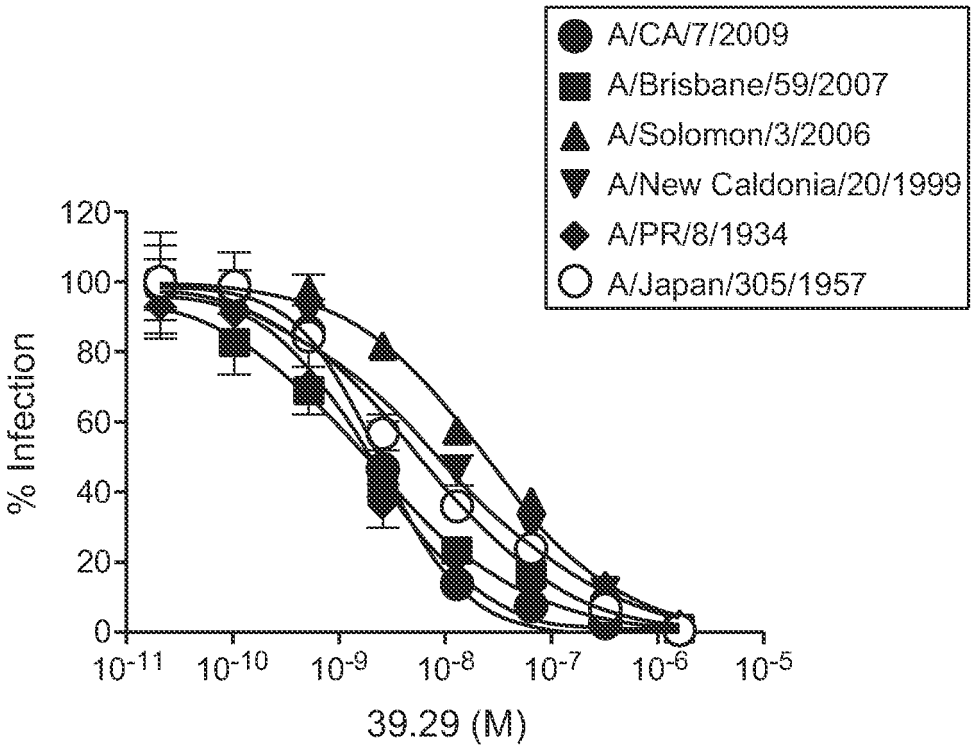

A/CA/7/2009
A/Brisbane/59/2007
A/Solomon/3/2006
A/New Caldonia/20/1999
A/PR/8/1934
A/Japan/305/1957
% Infection
120
100
80
60
40
20
0
10-11
10-10
10-9
10-8
10-7
10-6
10-5
39.29 (M)

FIG. 4A

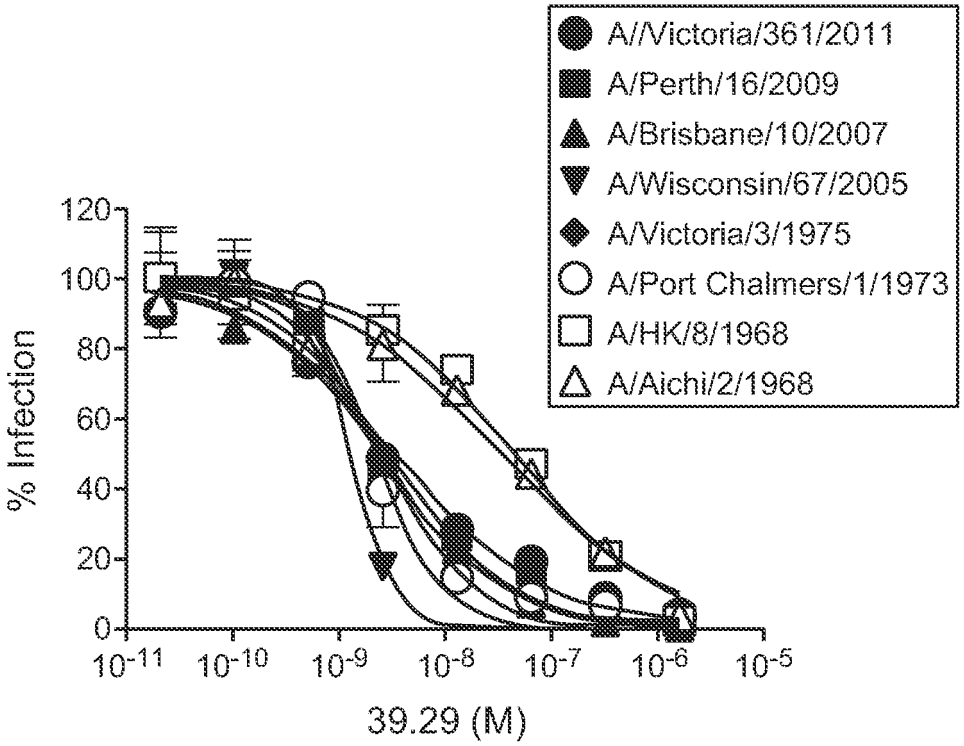

A//Victoria/361/2011
A/Perth/16/2009
A/Brisbane/10/2007
A/Wisconsin/67/2005
A/Victoria/3/1975
A/Port Chalmers/1/1973
A/HK/8/1968
A/Aichi/2/1968
% Infection
120
100
80
60
40
20
0
10-11
10-10
10-9
10-8
10-7
10-6
10-5
39.29 (M)

FIG. 4B

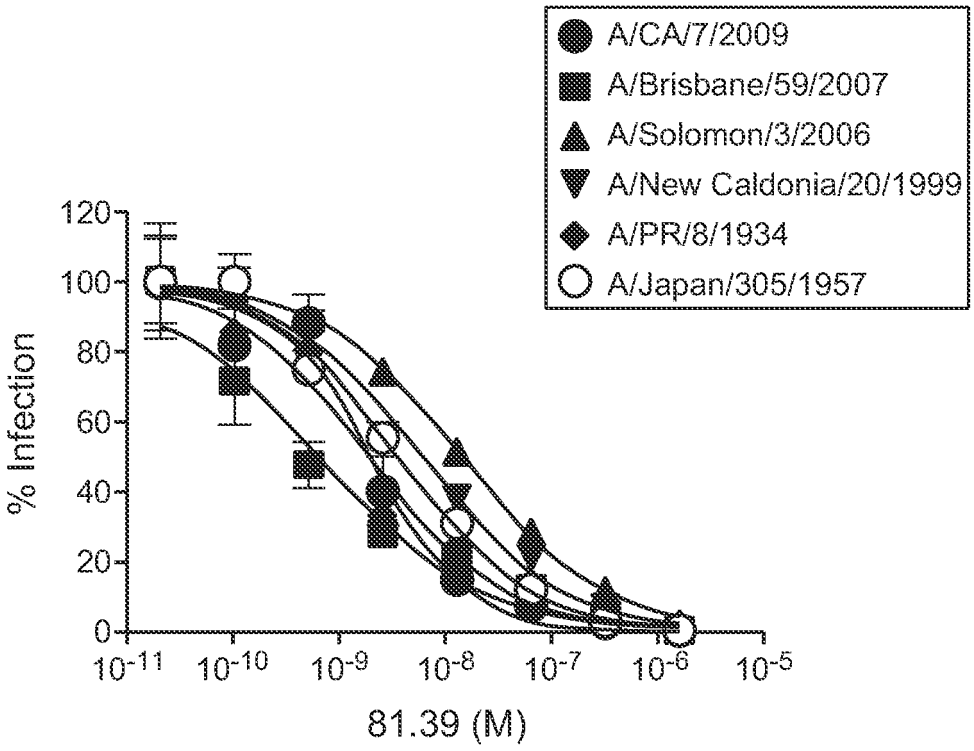

A/CA/7/2009
A/Brisbane/59/2007
A/Solomon/3/2006
A/New Caldonia/20/1999
A/PR/8/1934
A/Japan/305/1957
% Infection
120
100
80
60
40
20
0
10-11
10-10
10-9
10-8
10-7
10-6
10-5
81.39 (M)

FIG. 5A

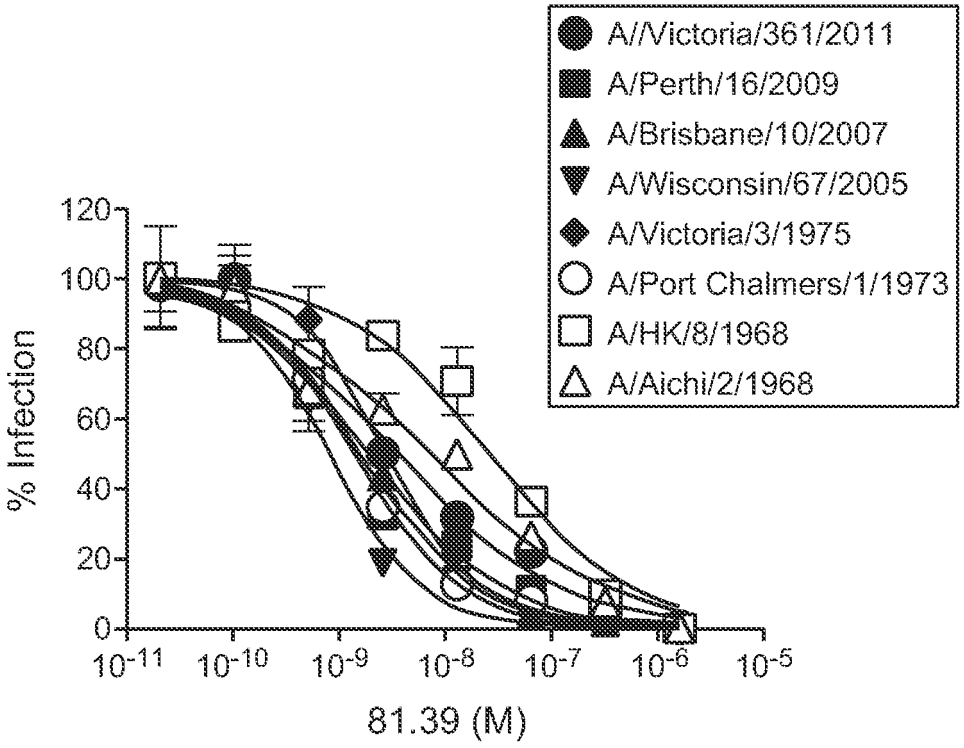

A//Victoria/361/2011
A/Perth/16/2009
A/Brisbane/10/2007
A/Wisconsin/67/2005
A/Victoria/3/1975
A/Port Chalmers/1/1973
A/HK/8/1968
A/Aichi/2/1968
% Infection
120
100
80
60
40
20
0
10-11
10-10
10-9
10-8
10-7
10-6
10-5
81.39 (M)

FIG. 5B

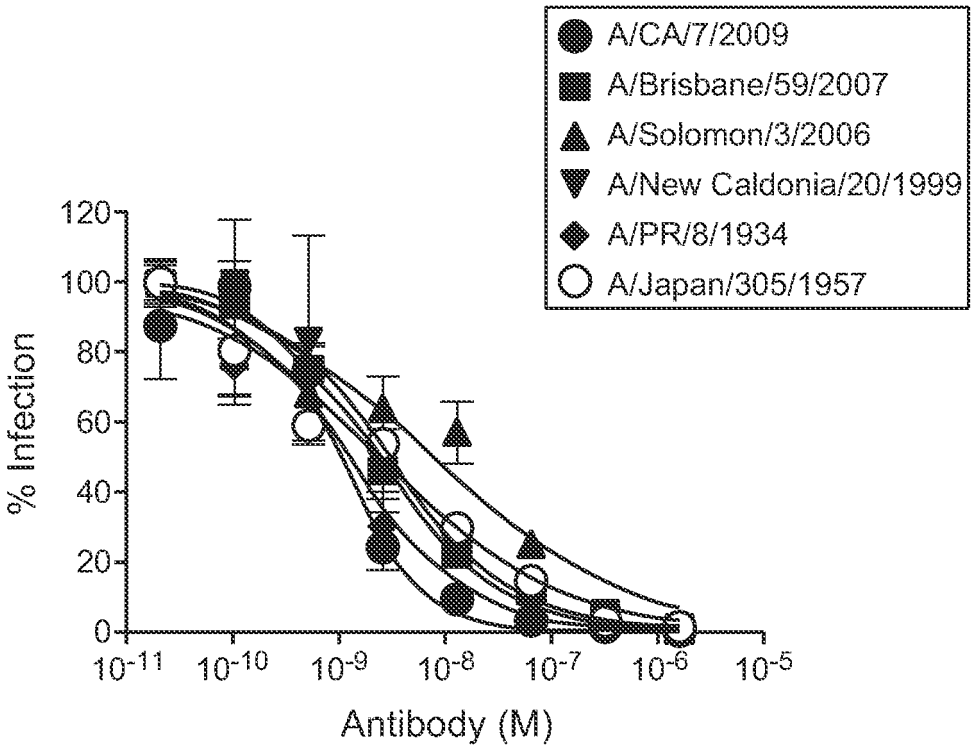

A/CA/7/2009
A/Brisbane/59/2007
A/Solomon/3/2006
A/New Caldonia/20/1999
A/PR/8/1934
A/Japan/305/1957
% Infection
120
100
80
60
40
20
0
10-11
10-10
10-9
10-8
10-7
10-6
10-5
Antibody (M)

FIG. 6

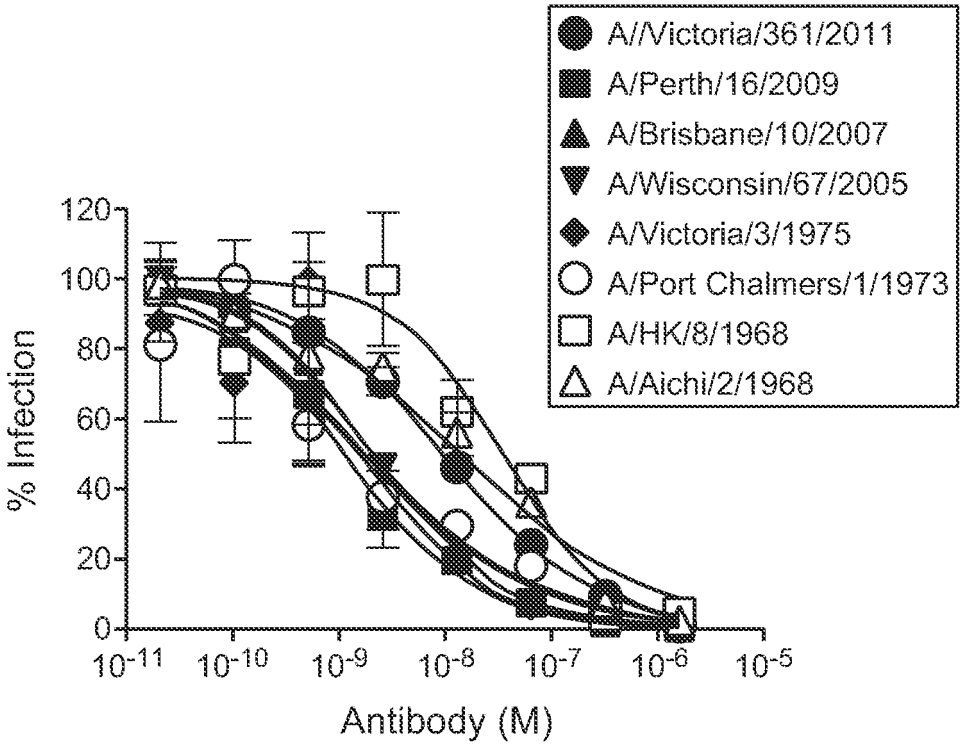

A//Victoria/361/2011
A/Perth/16/2009
A/Brisbane/10/2007
A/Wisconsin/67/2005
A/Victoria/3/1975
A/Port Chalmers/1/1973
A/HK/8/1968
A/Aichi/2/1968
% Infection
120
100
80
60
40
20
0
10-11
10-10
10-9
10-8
10-7
10-6
10-5
Antibody (M)

FIG. 7

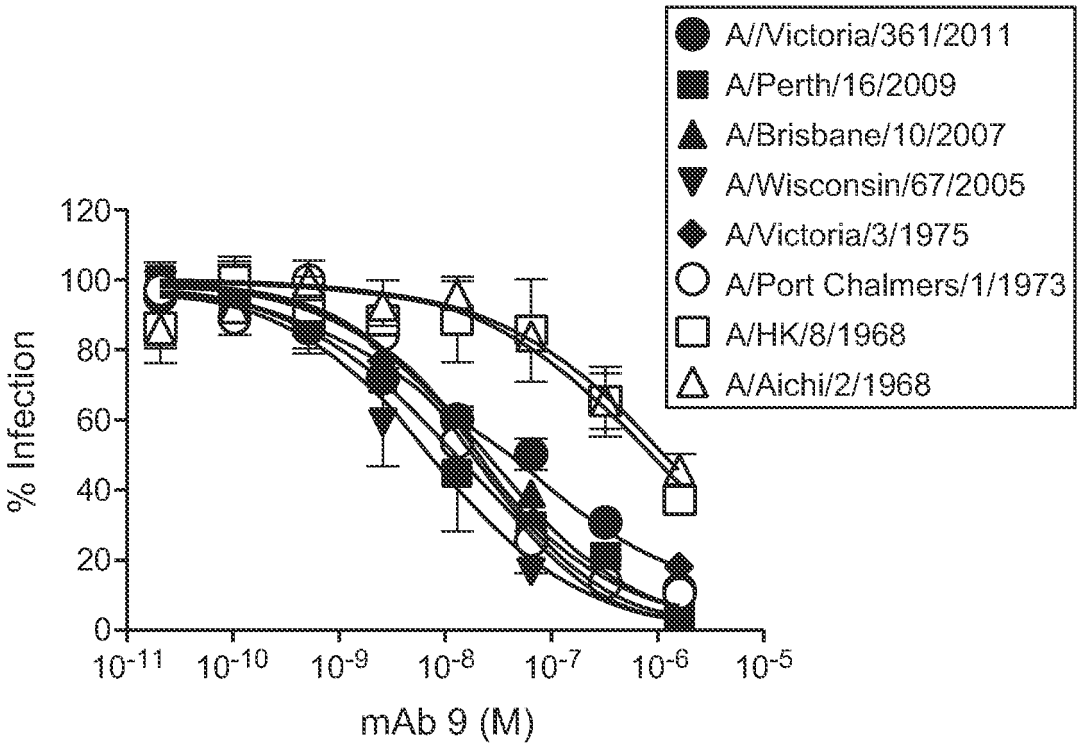

A//Victoria/361/2011
A/Perth/16/2009
A/Brisbane/10/2007
A/Wisconsin/67/2005
A/Victoria/3/1975
A/Port Chalmers/1/1973
A/HK/8/1968
A/Aichi/2/1968
% Infection
120
100
80
60
40
20
0
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
mAb 9 (M)

FIG. 8

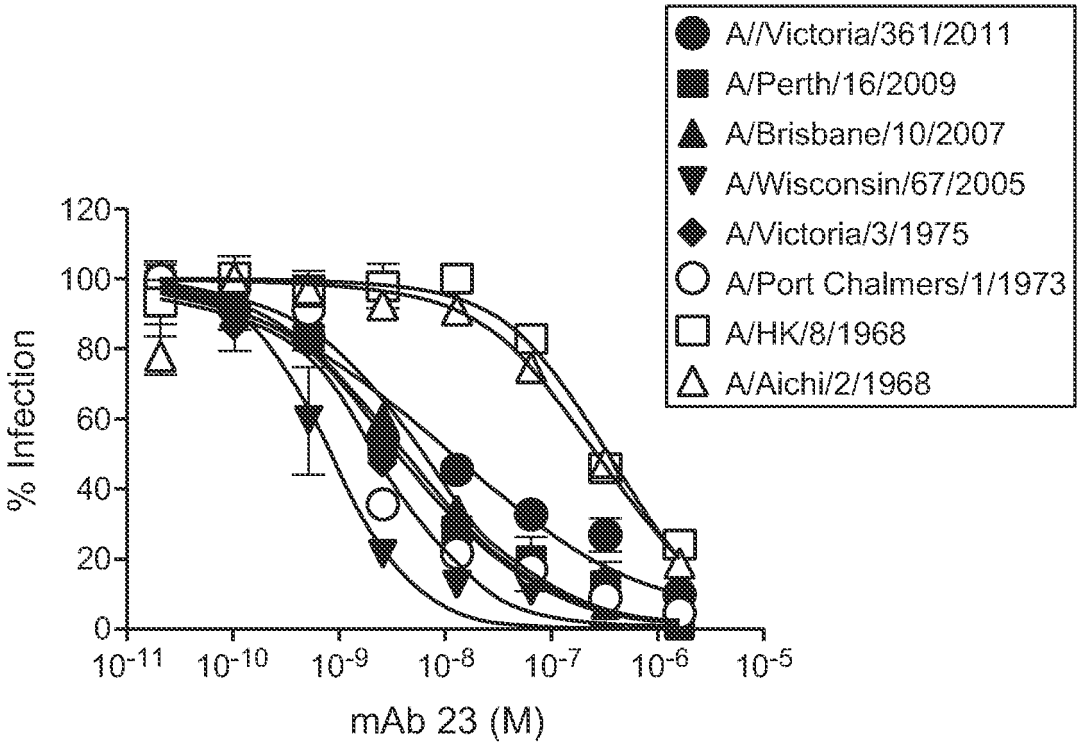

A//Victoria/361/2011
A/Perth/16/2009
A/Brisbane/10/2007
A/Wisconsin/67/2005
A/Victoria/3/1975
A/Port Chalmers/1/1973
A/HK/8/1968
A/Aichi/2/1968
% Infection
120
100
80
60
40
20
0
10^{-11}
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
10^{-5}
mAb 23 (M)

FIG. 9

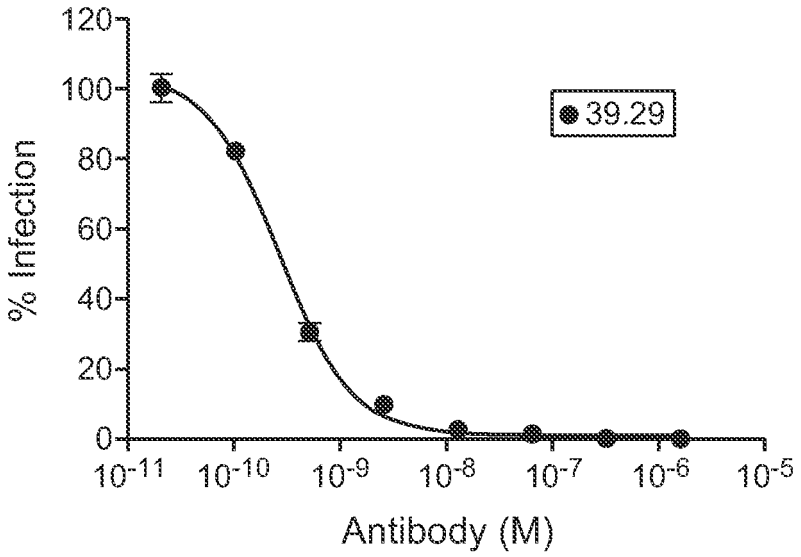

120
100
80
60
40
20
0
% Infection
39.29
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5}
Antibody (M)

FIG. 10

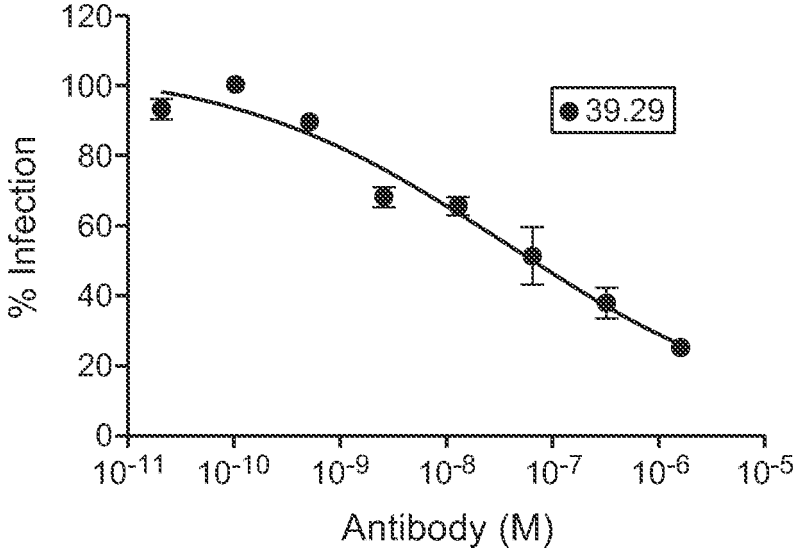

120
100
80
60
40
20
0
% Infection
39.29
10^{-11} 10^{-10} 10^{-9} 10^{-8} 10^{-7} 10^{-6} 10^{-5}
Antibody (M)

FIG. 11

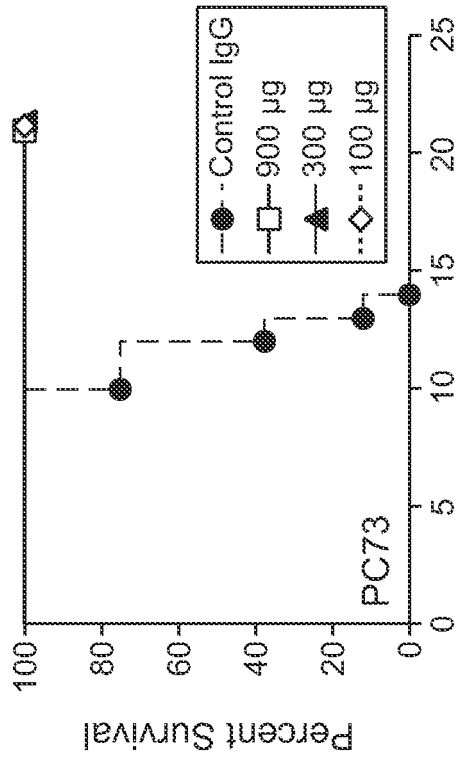


FIG. 12B

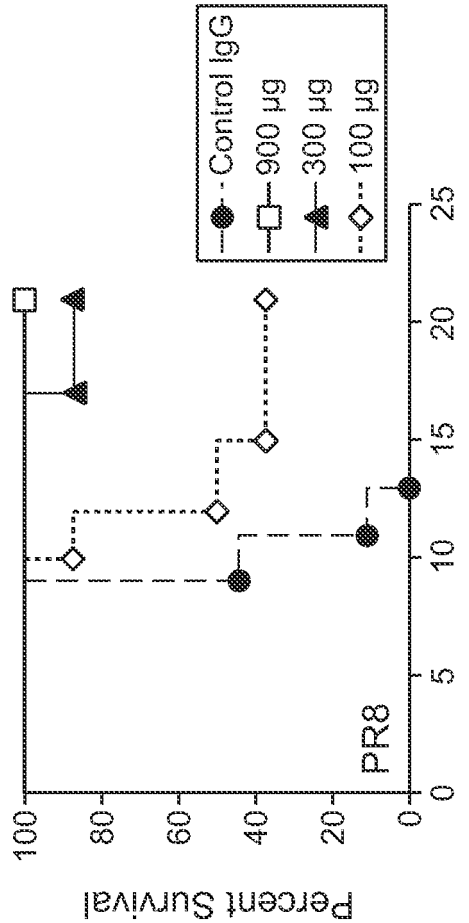


FIG. 12A

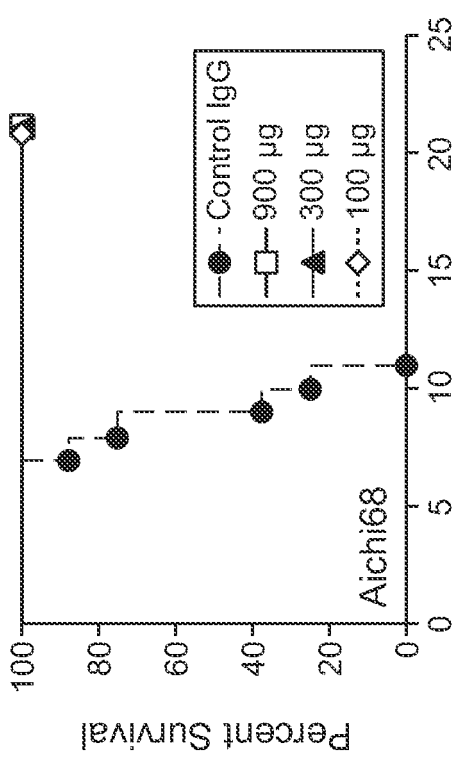


FIG. 12D

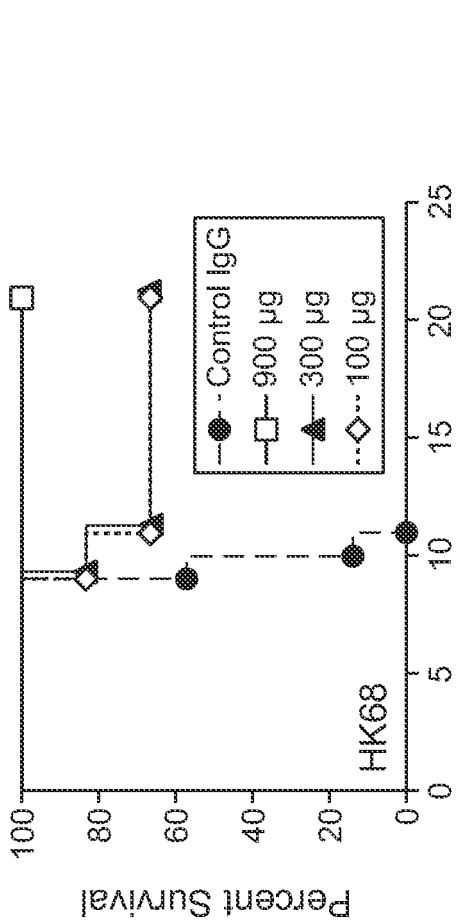


FIG. 12C

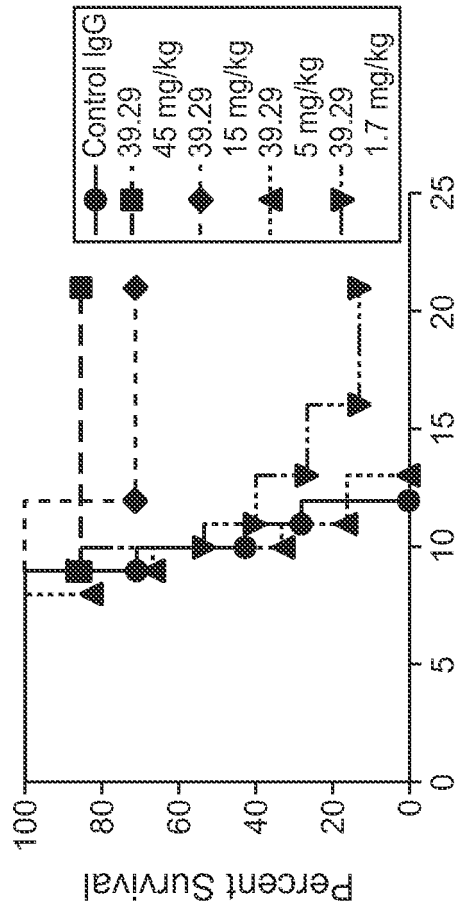


FIG. 13

FIG. 14

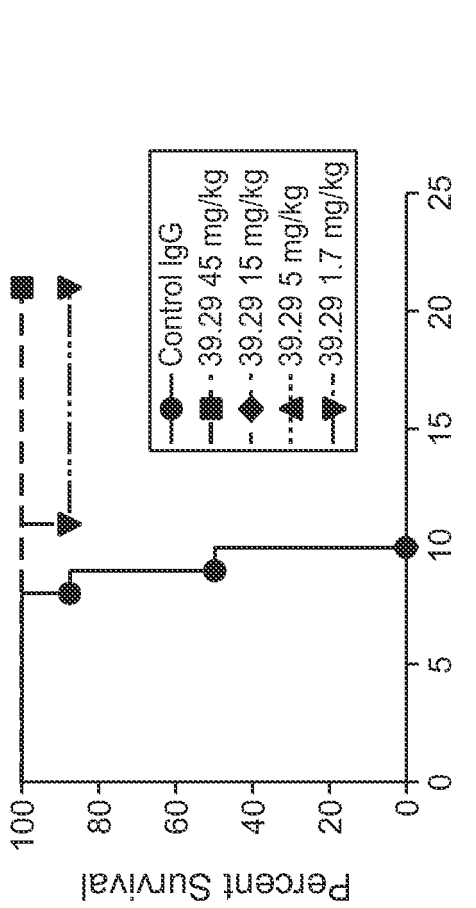


FIG. 15

FIG. 16

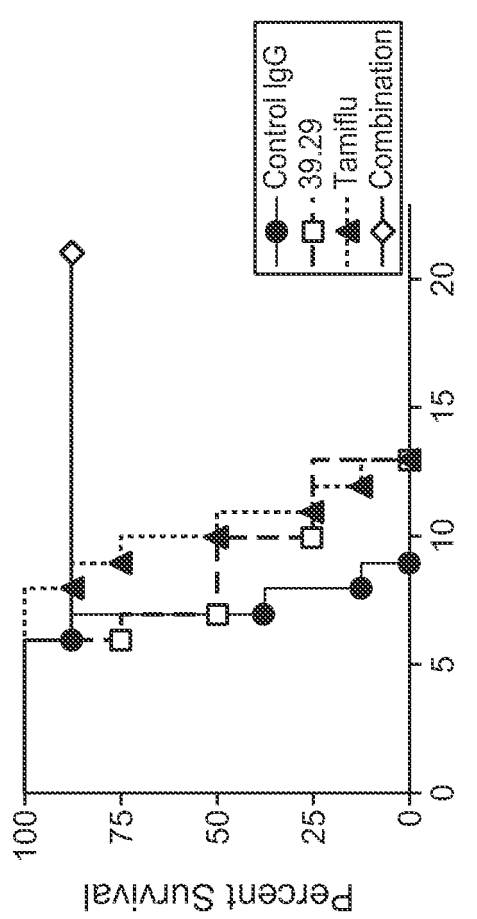


FIG. 18

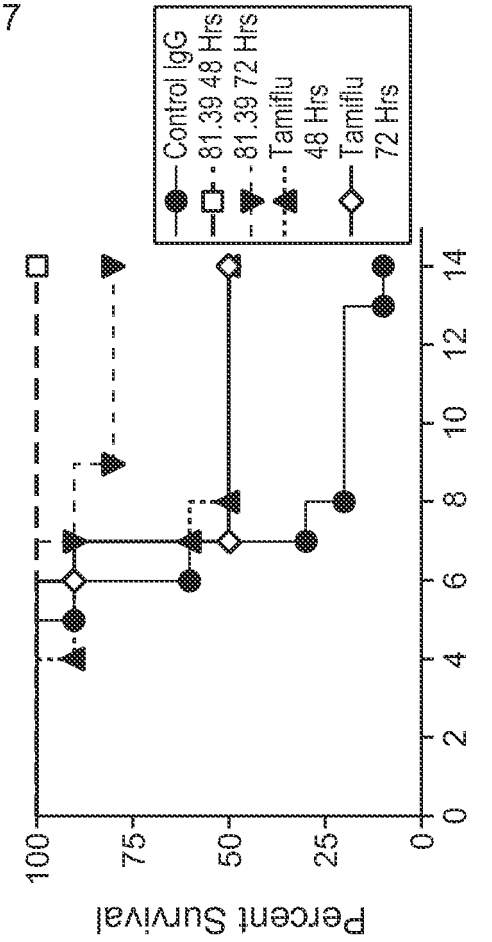


FIG. 19B

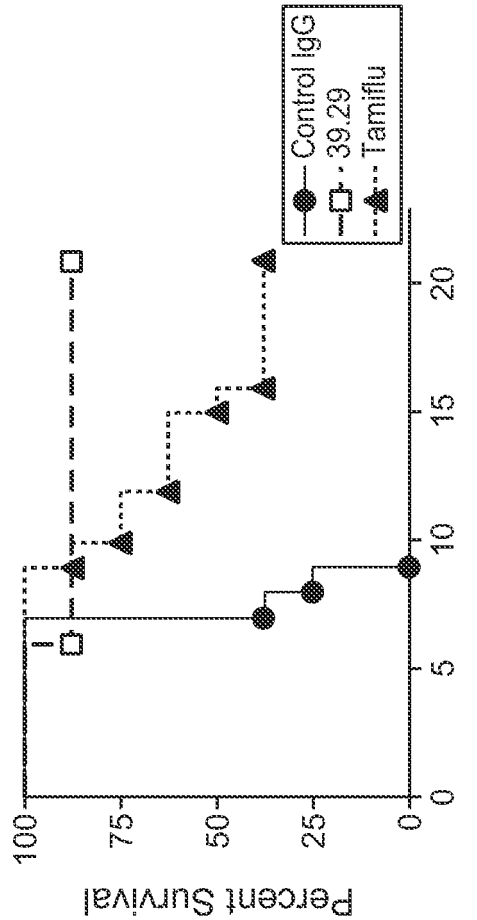


FIG. 17

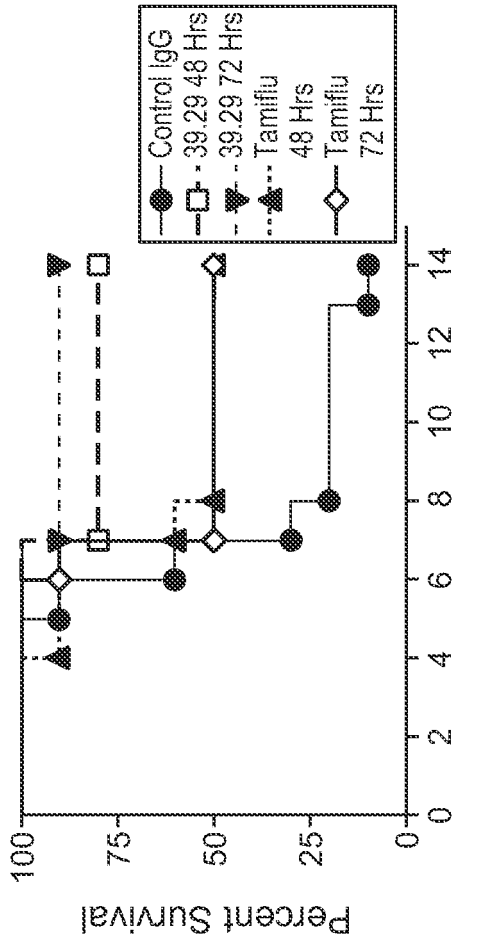


FIG. 19A

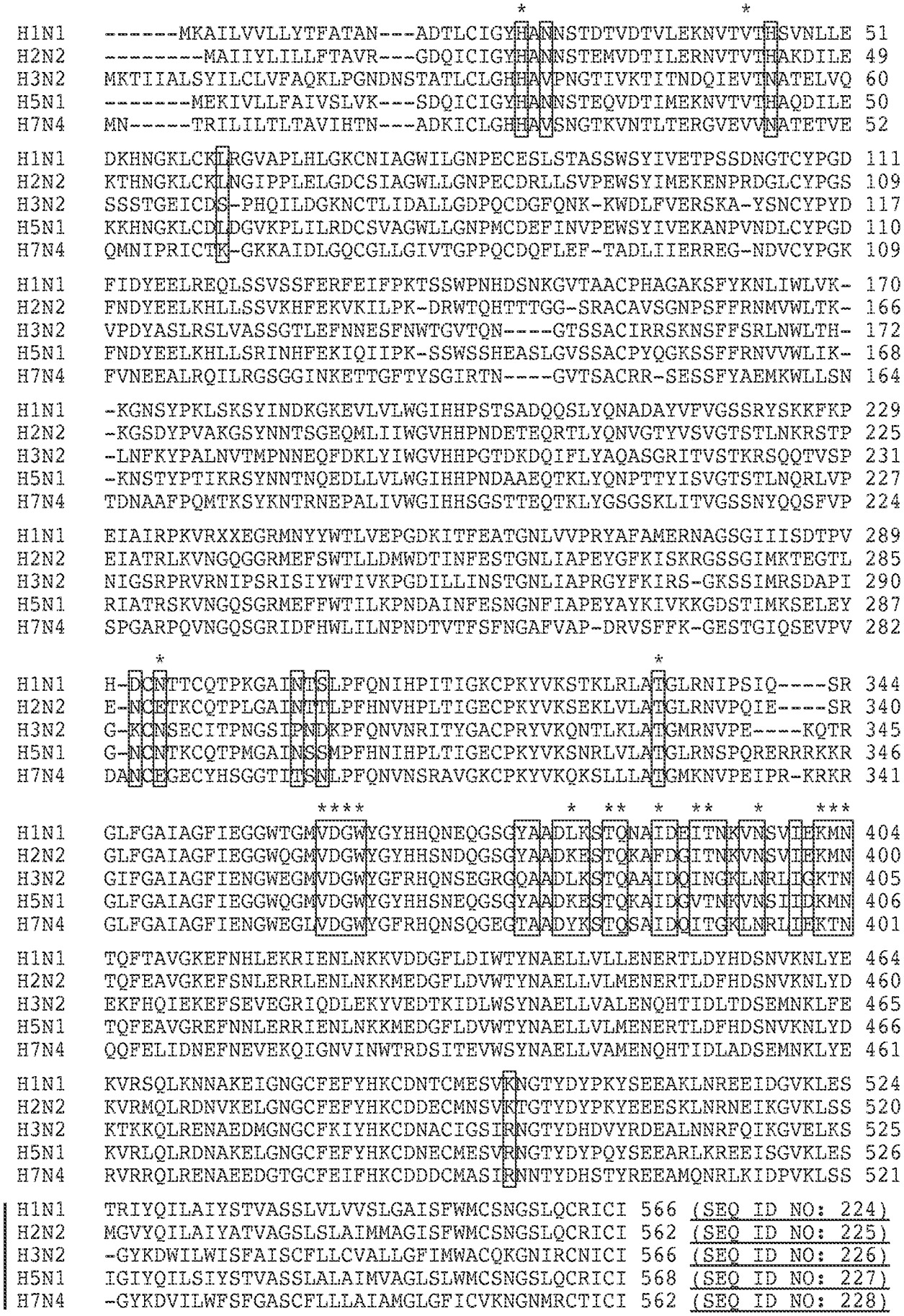

H1N1 -------MKAILVVLLYTFATAN---ADTLCIGYHANNSTDTVDTVLEKNVTVTHSVNLLE 51
H2N2 ---------MAIIYLILLFTAVR---GDQICIGYHANNSTEMVDTILERNVTVTHAKDILE 49
H3N2 MKTIIALSYILCLVFAQKLPGNDNSTATLCLGHHAVPNGTIVKTITNDQIEVTNATELVQ 60
H5N1 --------MEKIVLLFAIVSLVK---SDQICIGYHANNSTEQVDTIMEKNVTVTHAQDILE 50
H7N4 MN------TRILILTLTAVIHTN---ADKICLGHHAVSNGTKVNTLTERGVEVVNATETVE 52
H1N1 DKHNGKLCKLRGVAPLHLGKCNIAGWILGNPECESLSTASSWSYIVETPSSDNGTCYPGD 111
H2N2 KTHNGKLCKLNGIPPLELGDCSIAGWLLGNPECDRLLSVPEWSYIMEKENPRDGLCYPGS 109
H3N2 SSSTGEICDS-PHQILDGKNCTLIDALLGDPQCDGFQNK-KWDLFVERSKA-YSNCYPYD 117
H5N1 KKHNGKLCDLDGVKPLILRDCSVAGWLLGNPMCDEFINVPEWSYIVEKANPVNDLCYPGD 110
H7N4 QMNIPRICTK-GKKAIDLGQCGLLGIVTGPPQCDQFLEF-TADLIIERREG-NDVCYPGK 109
H1N1 FIDYEELREQLSSVSSFERFEIFPKTSSWPNHDSNKGVTAACPHAGAKSFYKNLIWLVK- 170
H2N2 FNDYEELKHLLSSVKHFEKVKILPK-DRWTQHTTTGG-SRACAVSGNPSFFRNMVWLTK- 166
H3N2 VPDYASLRSLVASSGTLEFNNESFNWTGVTQN----GTSSACIRRSKNSFFSRLNWLTH- 172
H5N1 FNDYEELKHLLSRINHFEKIQIIPK-SSWSSHEASLGVSSACPYQGKSSFFRNVVWLIK- 168
H7N4 FVNEEALRQILRGSGGINKETTGFTYSGIRTN----GVTSACRR-SESSFYAEMKWLLSN 164
H1N1 -KGNSYPKLSKSYINDKGKEVLVLWGIHHPSTSADQQSLYQNADAYVFVGSSRYSKKFKP 229
H2N2 -KGSDYPVAKGSYNNTSGEQMLIIWGVHHPNDETEQRTLYQNVGTYVSVGTSTLNKRSTP 225
H3N2 -LNFKYPALNVTMPNNEQFDKLYIWGVHHPGTDKDQIFLYAQASGRITVSTKRSQQTVSP 231
H5N1 -KNSTYPTIKRSYNNTNQEDLLVLWGIHHPNDAAEQTKLYQNPTTYISVGTSTLNQRLVP 227
H7N4 TDNAAFPQMTKSYKNTRNEPALIVWGIHHSGSTTEQTKLYGSGSKLITVGSSNYQQSFVP 224
H1N1 EIAIRPKVRXXEGRMNYYWTLVEPGDKITFEATGNLVVPRYAFAMERNAGSGIIISDTPV 289
H2N2 EIATRLKVNGQGGRMEFSWTLLDMWDTINFESTGNLIAPEYGFKISKRGSSGIMKTEGTL 285
H3N2 NIGSRPRVRNIPSRISIYWTIVKPGDILLINSTGNLIAPRGYFKIRS-GKSSIMRSDAPI 290
H5N1 RIATRSKVNGQSGRMEFFWTILKPNDAINFESNGNFIAPEYAYKIVKKGDSTIMKSELEY 287
H7N4 SPGARPQVNGQSGRIDFHWLILNPNDTVTFSFNGAFVAP-DRVSFFK-GESTGIQSEVPV 282
H1N1 H-DCNTTCQTPKGAINTSLPFQNIHPITIGKCPKYVKSTKLRLATGLRNIPSIQ-----SR 344
H2N2 E-NCETKCQTPLGAINTTLPFHNVHPLTIGECPKYVKSEKLVLATGLRNVPQIE-----SR 340
H3N2 G-KCNSECITPNGSIPNDKPFQNVNRITYGACPRYVKQNTLKLATGMRNVPE-----KQTR 345
H5N1 G-NCNTKCQTPMGAINSSMPFHNIHPLTIGECPKYVKSNRLVLATGLRNSPQRERRRKKR 346
H7N4 DANCEGECYHSGGTIISNLPFQNVNSRAVGKCPKYVKQKSLLLATGMKNVPEIPR-KRKR 341
H1N1 GLFGAIAGFIEGGWTGMVDGWYGYHHQNEQGSGYAADLKSTQNAIDEITNKVNSVIEKMN 404
H2N2 GLFGAIAGFIEGGWQGMVDGWYGYHHSNDQGSGYAADKESTQKAFDGITNKVNSVIEKMN 400
H3N2 GIFGAIAGFIENGWEGMVDGWYGFRHQNSEGRGQAADLKSTQAAIDQINGKLNRLIGKTN 405
H5N1 GLFGAIAGFIEGGWQGMVDGWYGYHHSNEQGSGYAADKESTQKAIDGVTNKVNSIIDKMN 406
H7N4 GLFGAIAGFIENGWEGLVDGWYGFRHQNSQGEGTAADYKSTQSAIDQITGKLNRLIEKTN 401
H1N1 TQFTAVGKEFNHLEKRIENLNKKVDDGFLDIWTYNAELLVLLENERTLDYHDSNVKNLYE 464
H2N2 TQFEAVGKEFSNLERRLENLNKKMEDGFLDVWTYNAELLVLMENERTLDFHDSNVKNLYD 460
H3N2 EKFHQIEKEFSEVEGRIQDLEKYVEDTKIDLWSYNAELLVALENQHTIDLTDSEMNKLFE 465
H5N1 TQFEAVGREFNNLERRIENLNKKMEDGFLDVWTYNAELLVLMENERTLDFHDSNVKNLYD 466
H7N4 QQFELIDNEFNEVEKQIGNVINWTRDSITEVWSYNAELLVAMENQHTIDLADSEMNKLYE 461
H1N1 KVRSQLKNNAKEIGNGCFEFYHKCDNTCMESVKNGTYDYPKYSEEAKLNREEIDGVKLES 524
H2N2 KVRMQLRDNVKELGNGCFEFYHKCDDECMNSVKTGTYDYPKYEEESKLNRNEIKGVKLSS 520
H3N2 KTKKQLRENAEDMGNGCFKIYHKCDNACIGSIRNGTYDHDVYRDEALNNRFQIKGVELKS 525
H5N1 KVRLQLRDNAKELGNGCFEFYHKCDNECMESVRNGTYDYPQYSEEARLKREEISGVKLES 526
H7N4 RVRRQLRENAEEDGTGCFEIFHKCDDDCMASIRNNTYDHSTYREEAMQNRLKIDPVKLSS 521
H1N1 TRIYQILAIYSTVASSLVLVVSLGAISFWMCSNGSLQCRICI 566 (SEQ ID NO: 224)
H2N2 MGVYQILAIYATVAGSLSLAIMMAGISFWMCSNGSLQCRICI 562 (SEQ ID NO: 225)
H3N2 -GYKDWILWISFAISCFLLCVALLGFIMWACQKGNIRCNICI 566 (SEQ ID NO: 226)
H5N1 IGIYQILSIYSTVASSLALAIMVAGLSLWMCSNGSLQCRICI 568 (SEQ ID NO: 227)
H7N4 -GYKDVILWFSFGASCFLLLAIAMGLGFICVKNGNMRCTICI 562 (SEQ ID NO: 228)

FIG. 20

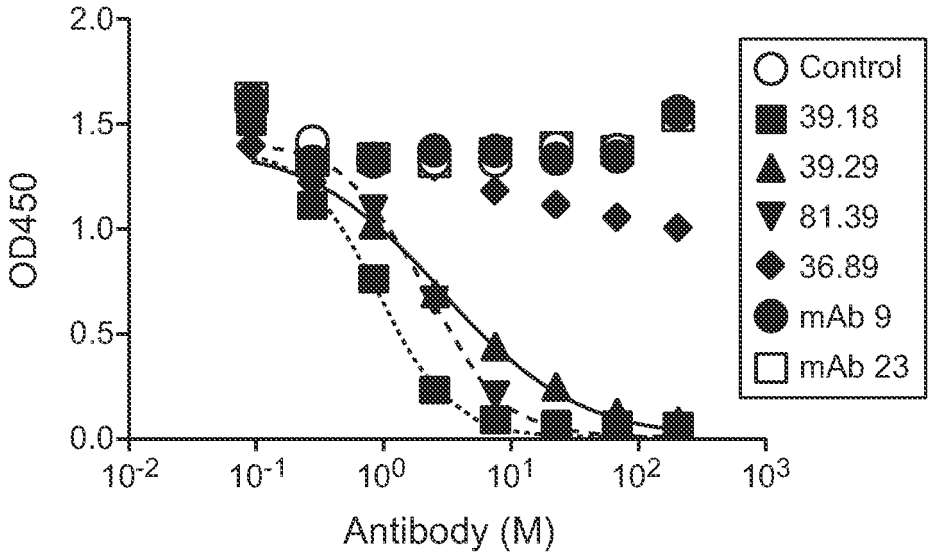


FIG. 21A

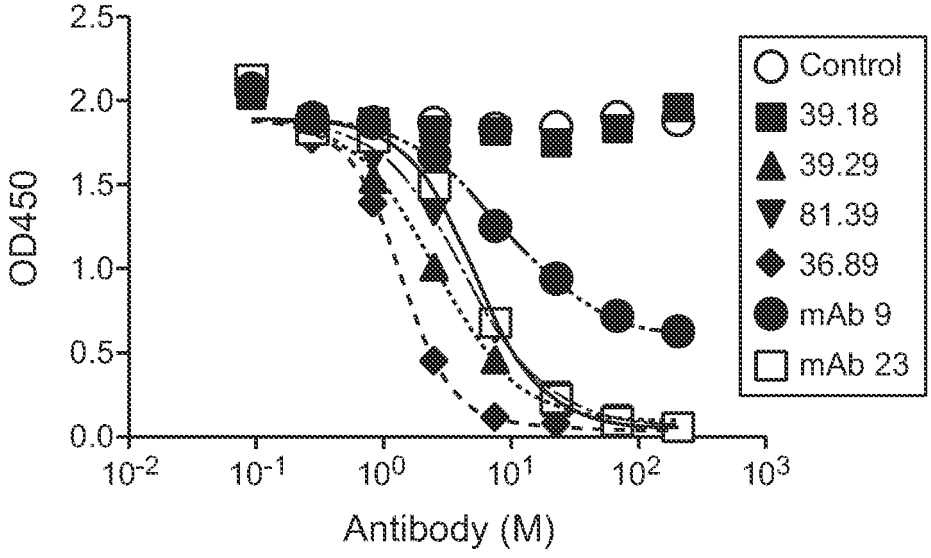


FIG. 21B

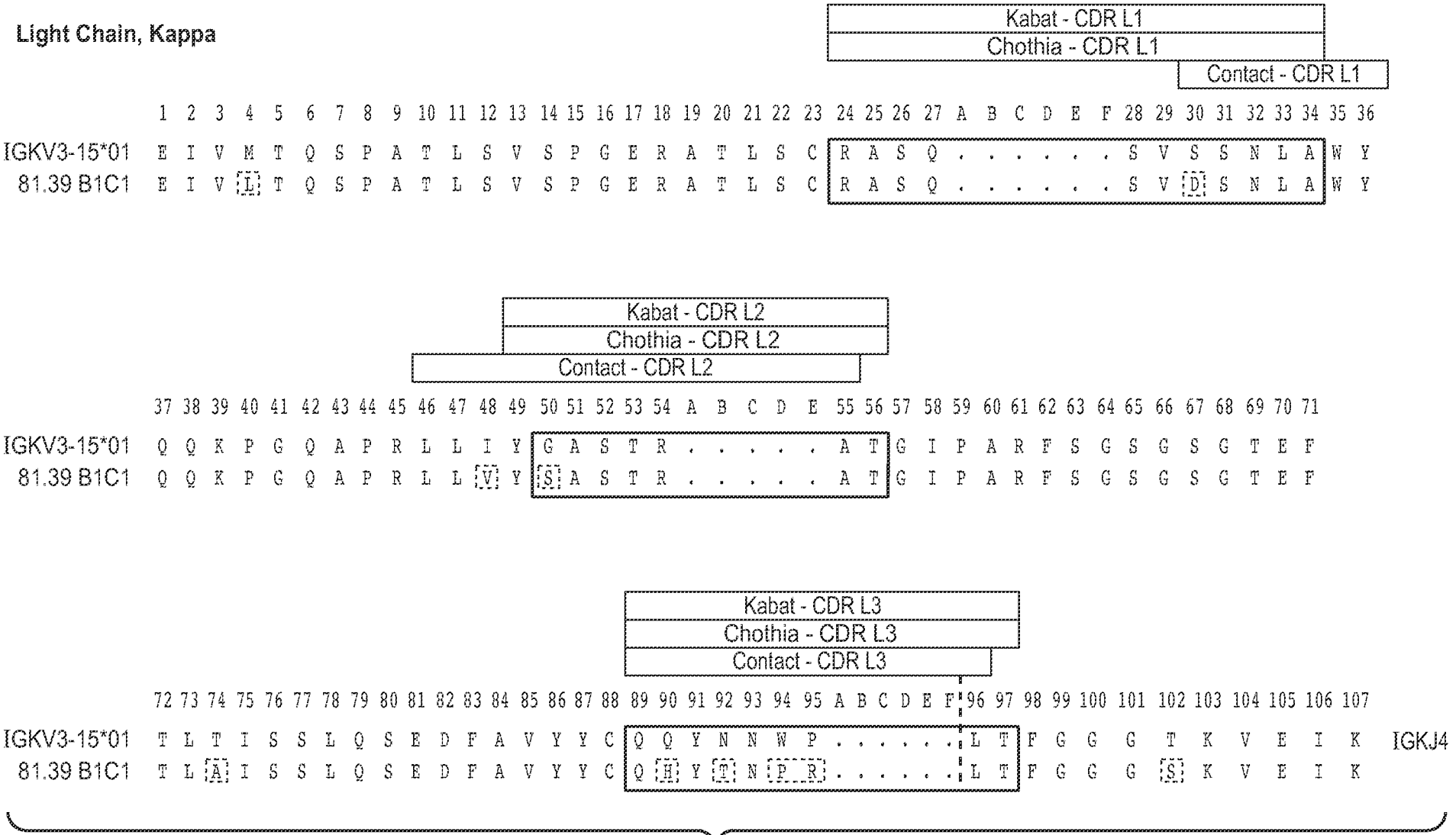

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
81.39 B1C1 E I V L T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V D S N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
81.39 B1C1 Q Q K P G Q A P R L L V Y S A S T R . . . . . A T G I P A R F S G S G S G T E F
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . L T F G G G T K V E I K IGKJ4
81.39 B1C1 T L A I S S L Q S E D F A V Y Y C Q H Y T N P R . . . . . L T F G G G S K V E I K

FIG. 22A

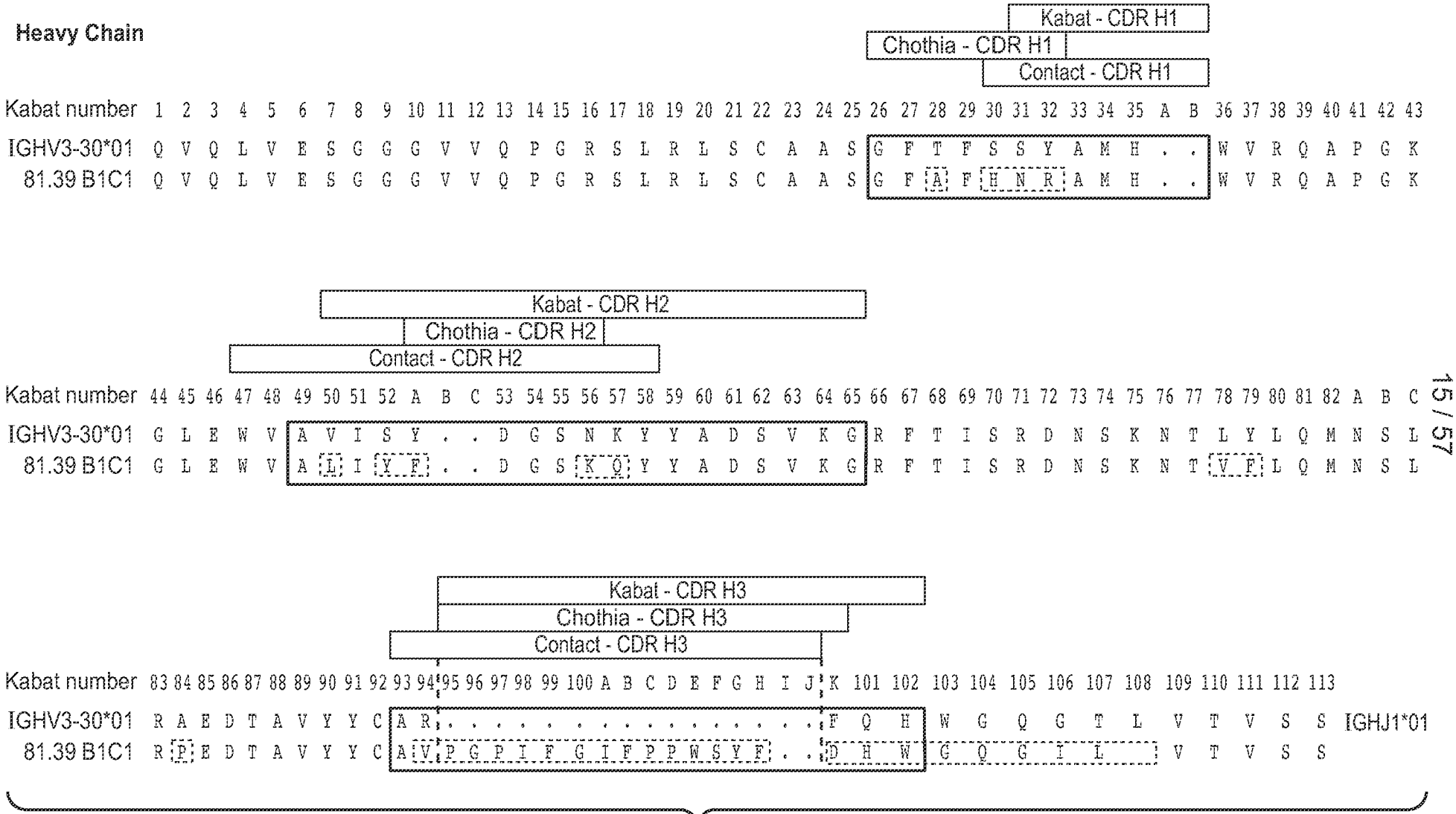

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 B1C1 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 B1C1 G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 B1C1 R P E D T A V Y Y C A V P G P I F G I F P P W S Y F . . D H W G Q G I L V T V S S

FIG. 22B

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
IGKV3-15*01
81.39 SVSH-NYP
IGKJ4

FIG. 23A

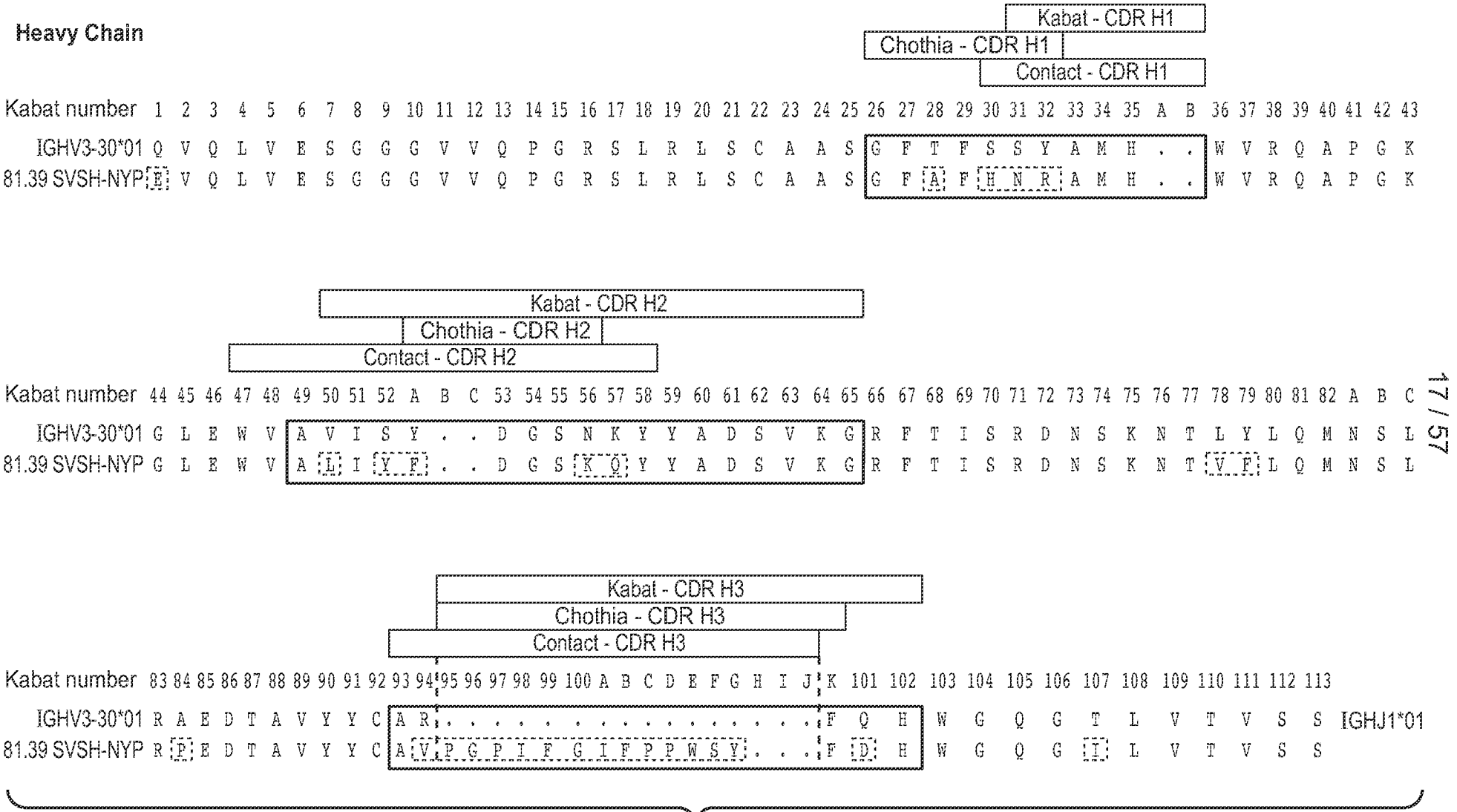

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 SVSH-NYP E V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 SVSH-NYP G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 SVSH-NYP R P E D T A V Y Y C A V P G P I F G I F P P W S Y . . . F D H W G Q G I L V T V S S

FIG. 23B

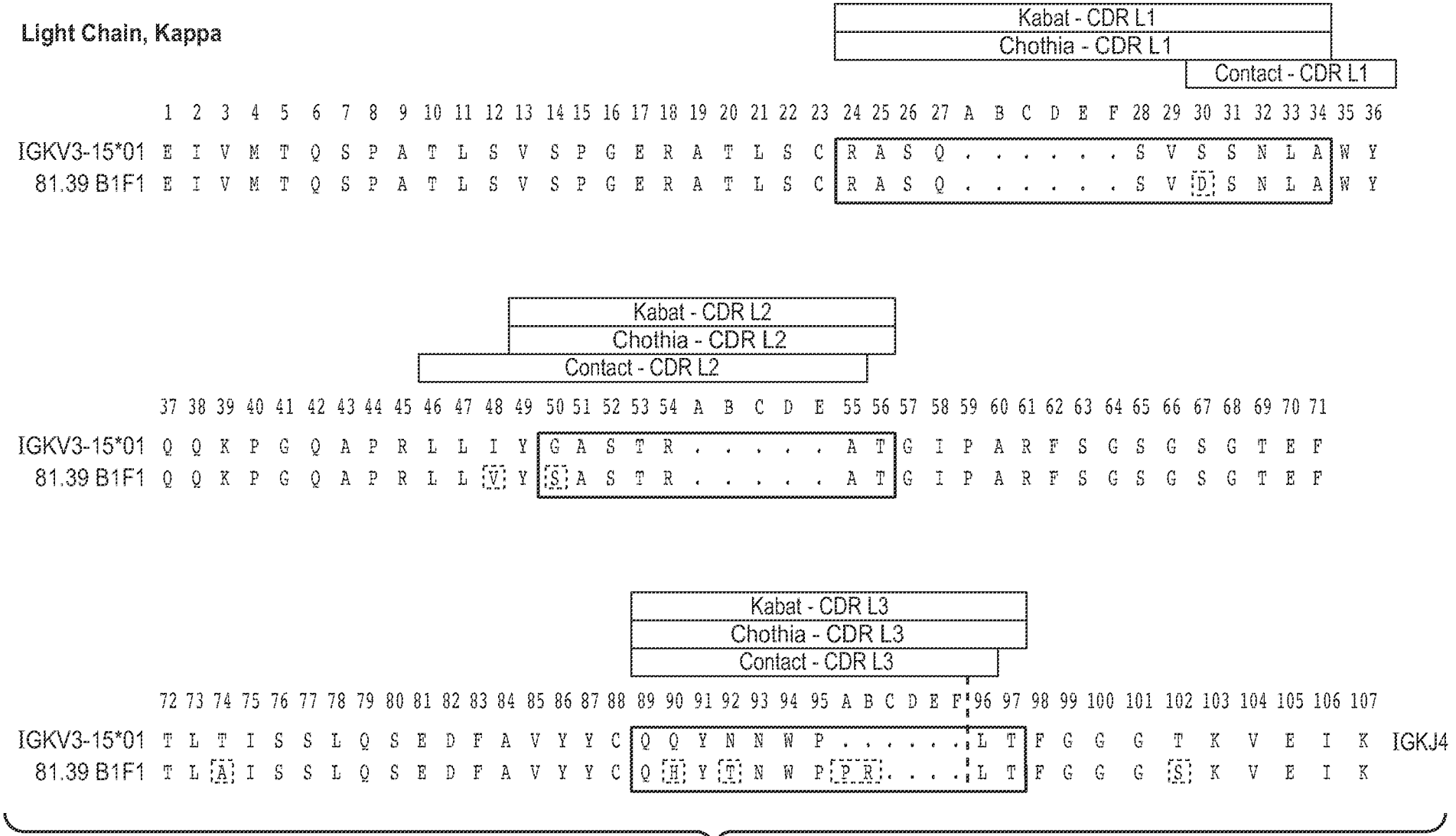

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
81.39 B1F1 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V D S N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
81.39 B1F1 Q Q K P G Q A P R L L V Y S A S T R . . . . . A T G I P A R F S G S G S G T E F
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . L T F G G G T K V E I K IGKJ4
81.39 B1F1 T L A I S S L Q S E D F A V Y Y C Q H Y T N W P P R . . . . L T F G G G S K V E I K

FIG. 24A

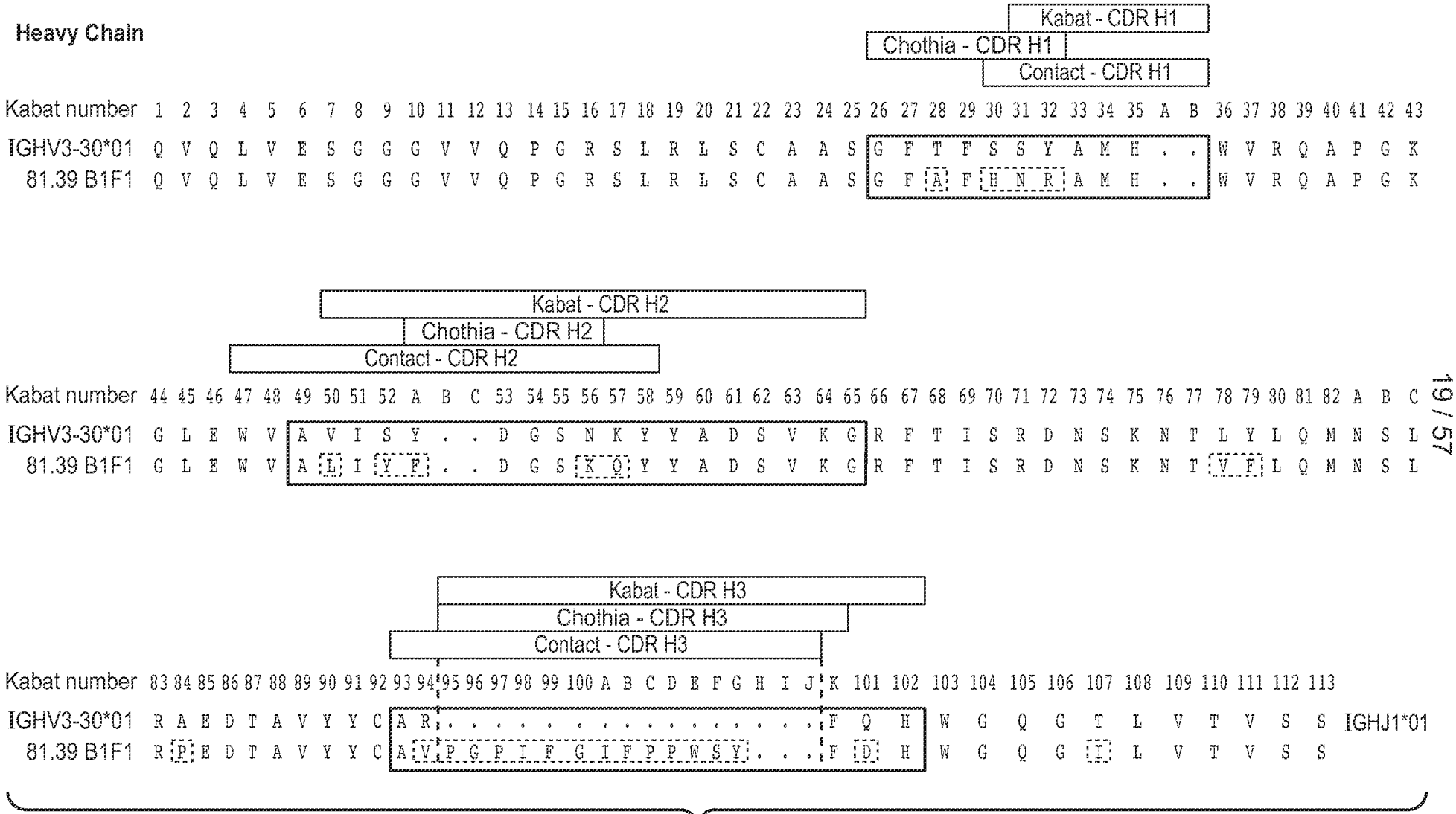

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 B1F1 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 B1F1 G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 B1F1 R P E D T A V Y Y C A V P G P I F G I F P P W S Y . . . F D H W G Q G I L V T V S S

FIG. 24B

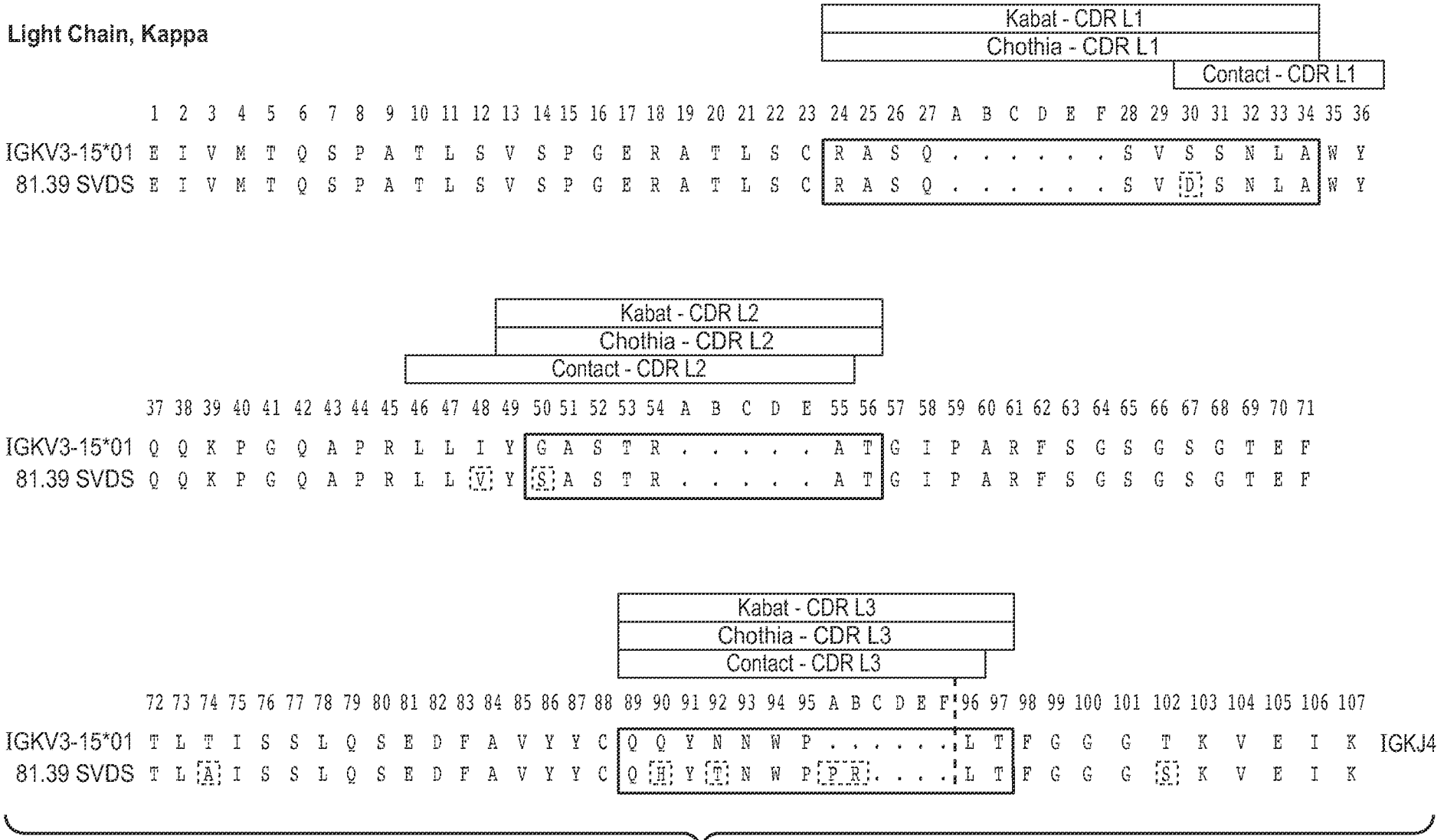

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
81.39 SVDS E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V D S N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
81.39 SVDS Q Q K P G Q A P R L L V Y S A S T R . . . . . A T G I P A R F S G S G S G T E F
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . L T F G G G T K V E I K IGKJ4
81.39 SVDS T L A I S S L Q S E D F A V Y Y C Q H Y T N W P P R . . . . L T F G G G S K V E I K

FIG. 25A

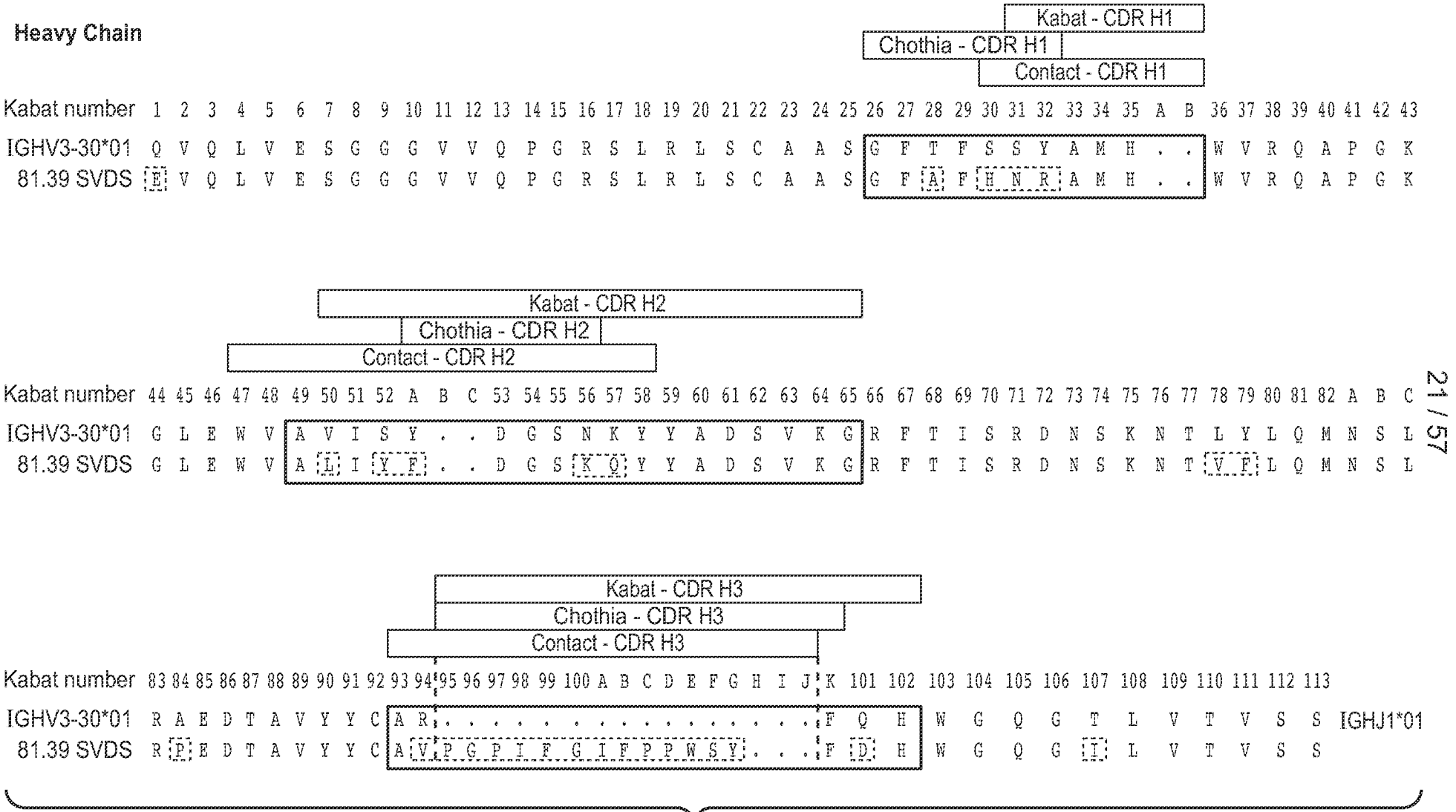

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 SVDS E V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 SVDS G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 SVDS R P E D T A V Y Y C A V P G P I F G I F P P W S Y . . . F D H W G Q G I L V T V S S

FIG. 25B

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
IGKV3-15*01
81.39 SVSS
IGKJ4

FIG. 26A

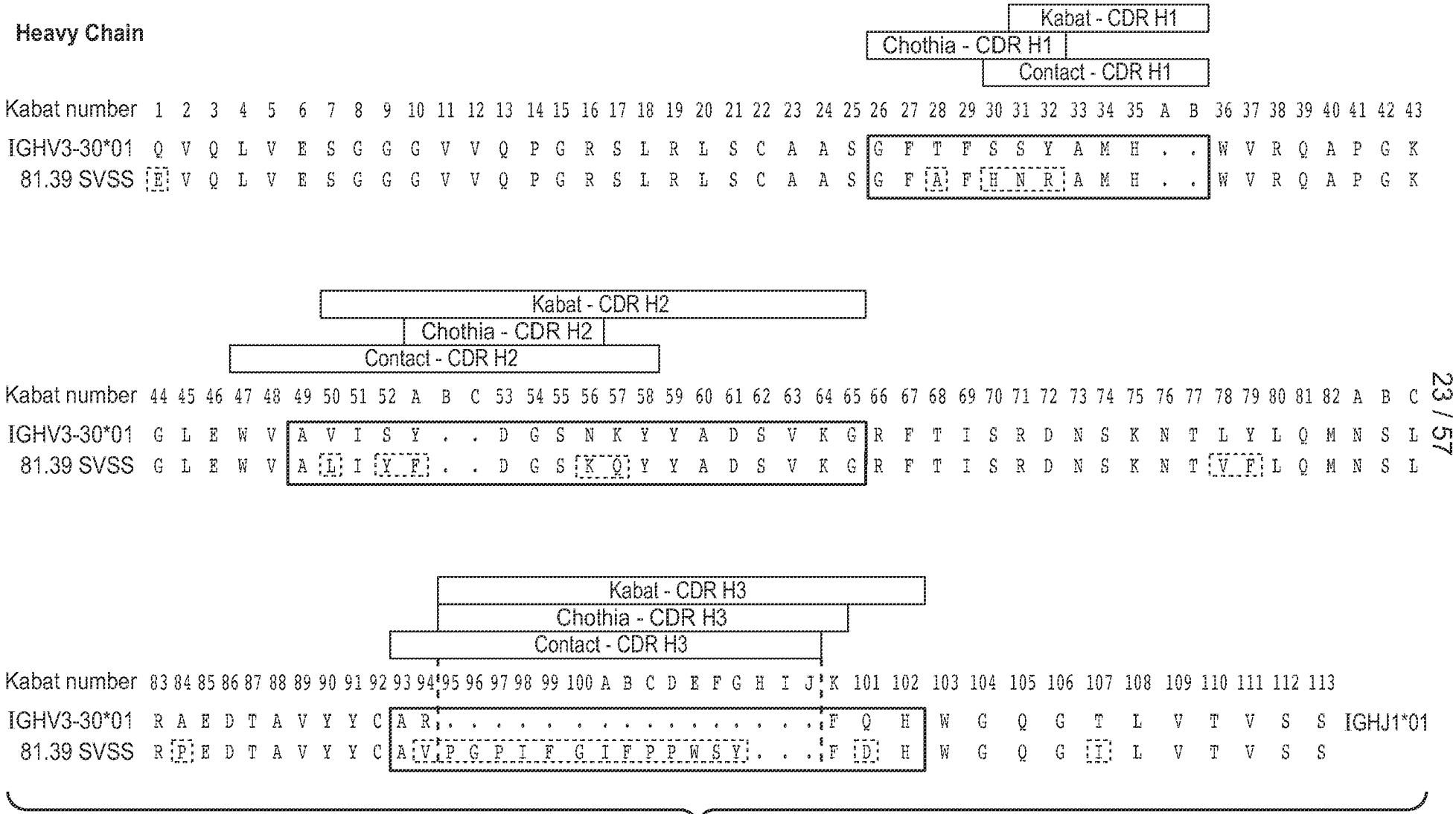

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 SVSS E V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 SVSS G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 SVSS R P E D T A V Y Y C A V P G P I F G I F P P W S Y . . . F D H W G Q G I L V T V S S

FIG. 26B

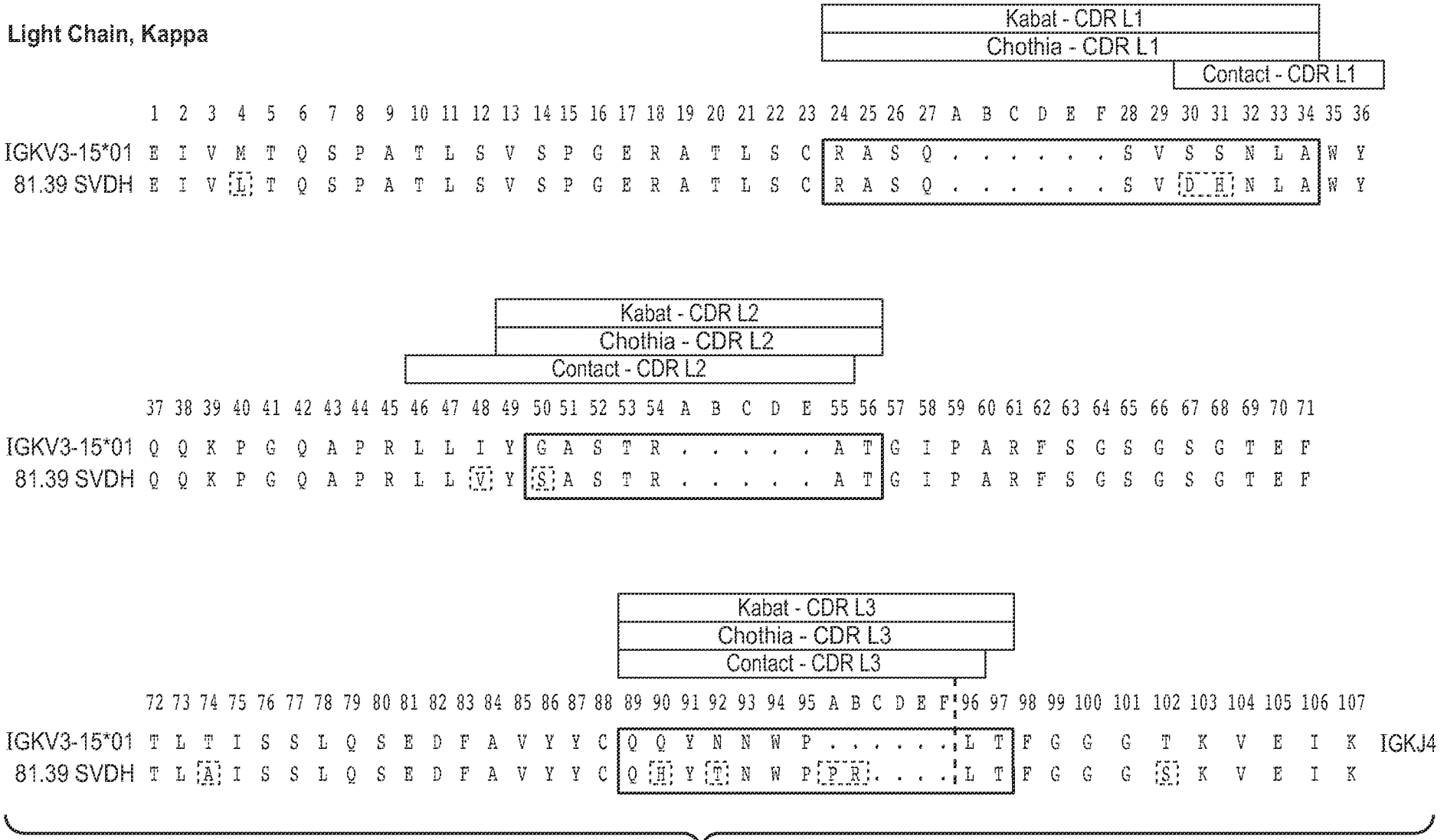

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
81.39 SVDH E I V L T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V D H N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
81.39 SVDH Q Q K P G Q A P R L L V Y S A S T R . . . . . A T G I P A R F S G S G S G T E F
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . L T F G G G T K V E I K IGKJ4
81.39 SVDH T L A I S S L Q S E D F A V Y Y C Q H Y T N W P P R . . . . L T F G G G S K V E I K

FIG. 27A

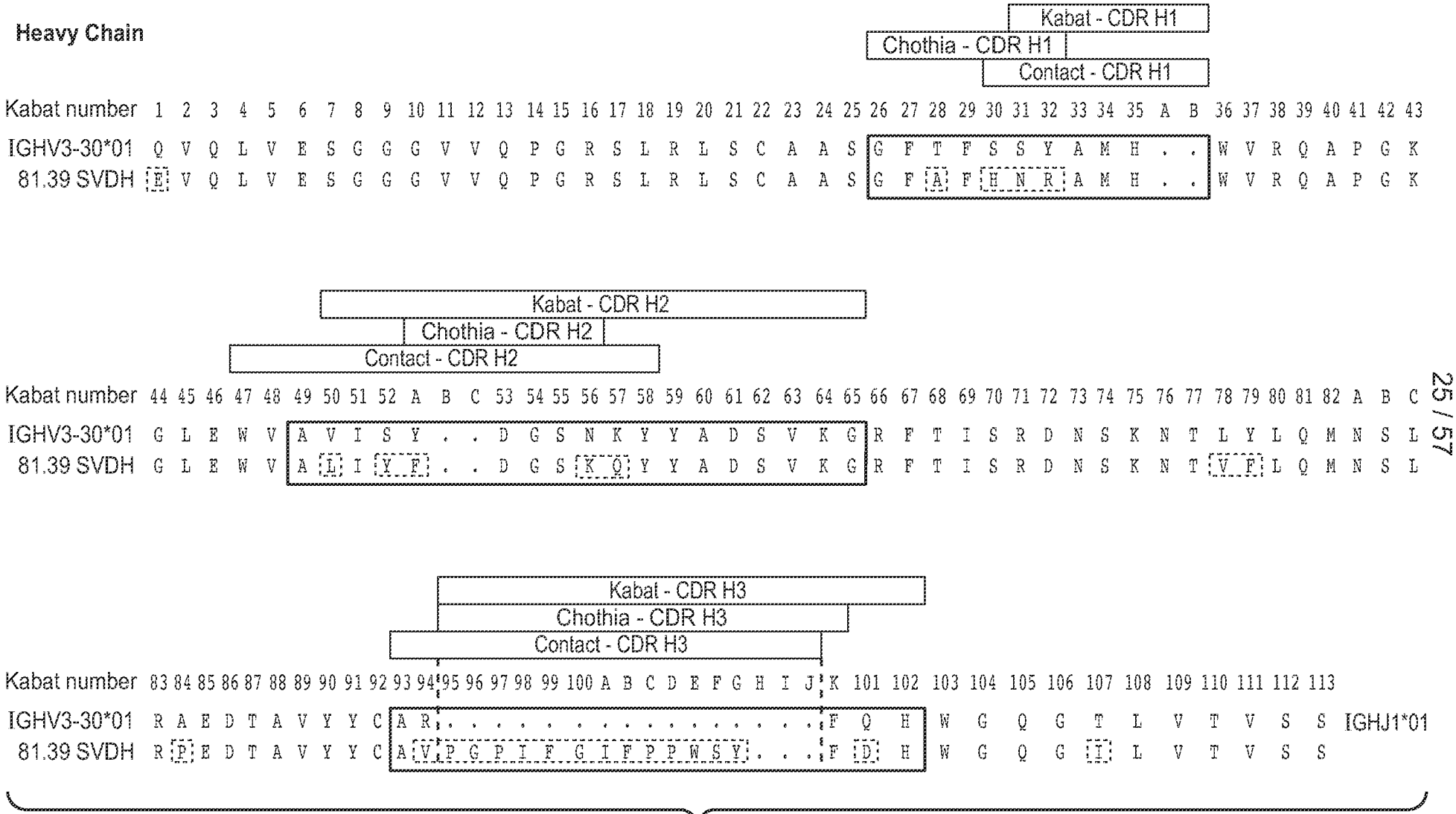

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 SVDH E V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 SVDH G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 SVDH R P E D T A V Y Y C A V P G P I F G I F P P W S Y . . . F D H W G Q G I L V T V S S

FIG. 27B

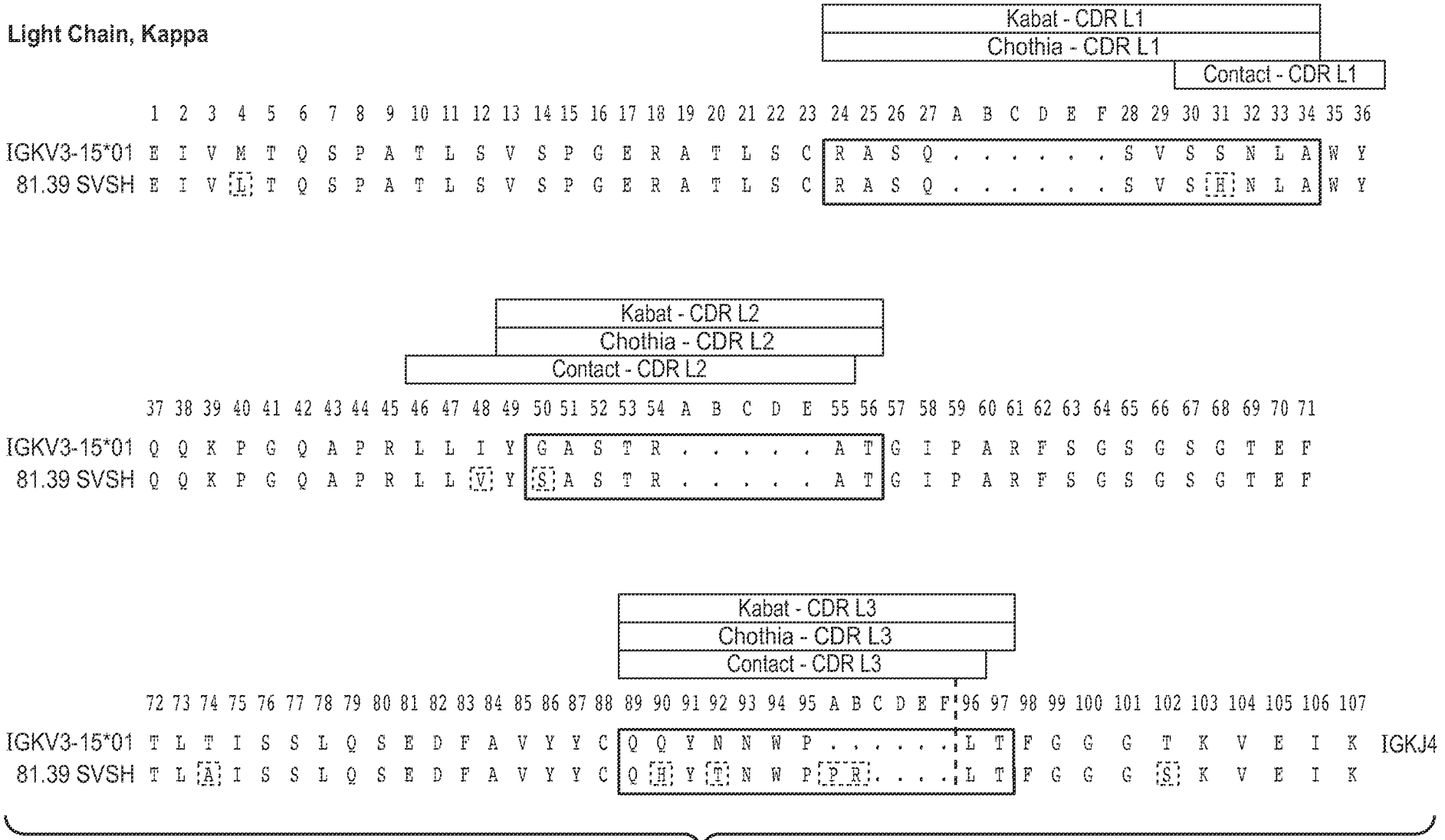

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
81.39 SVSH E I V L T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S H N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
81.39 SVSH Q Q K P G Q A P R L L V Y S A S T R . . . . . A T G I P A R F S G S G S G T E F
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . L T F G G G T K V E I K IGKJ4
81.39 SVSH T L A I S S L Q S E D F A V Y Y C Q H Y T N W P P R . . . . L T F G G G S K V E I K

FIG. 28A

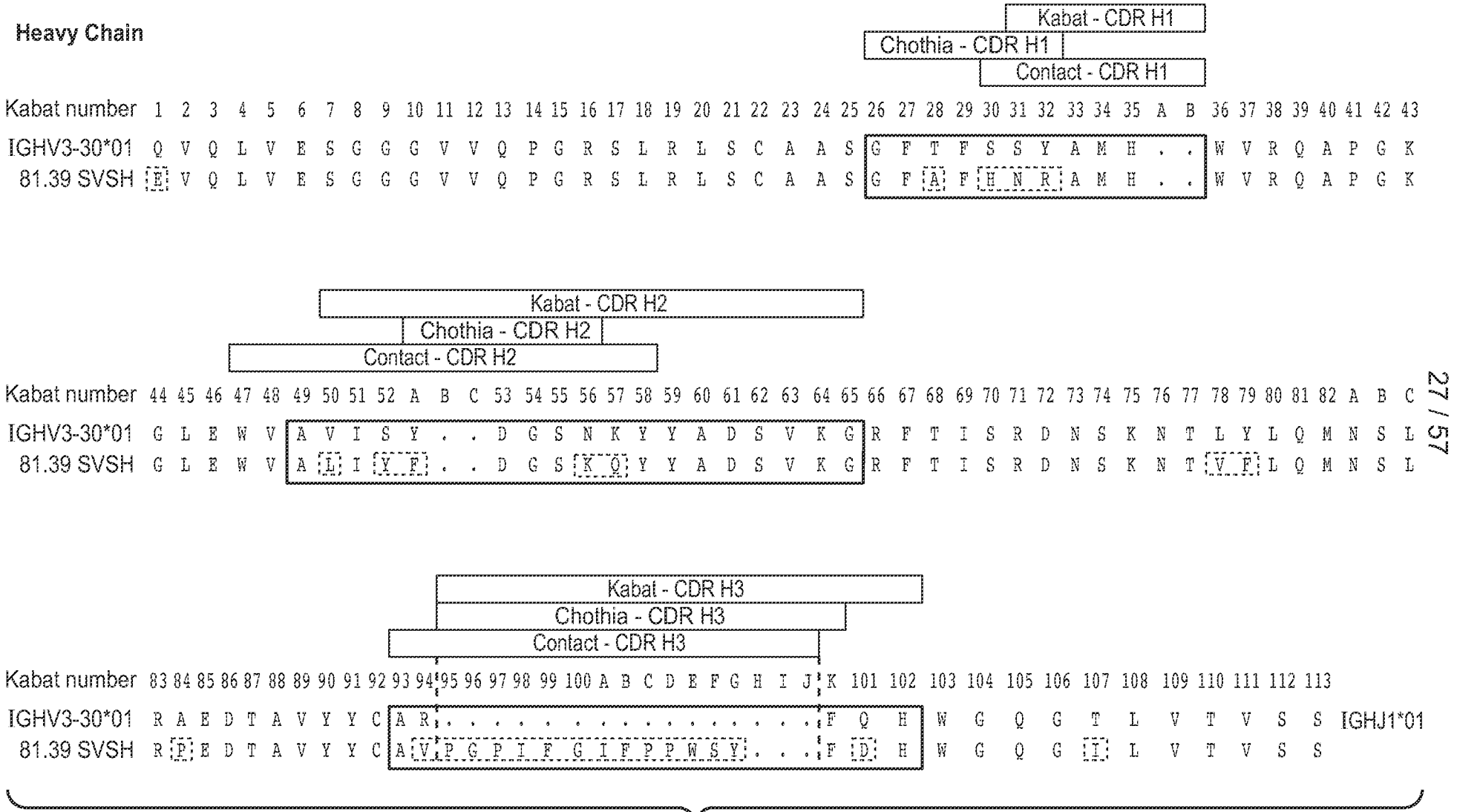

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 SVSH E V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 SVSH G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 SVSH R P E D T A V Y Y C A V P G P I F G I F P P W S Y . . . F D H W G Q G I L V T V S S

FIG. 28B

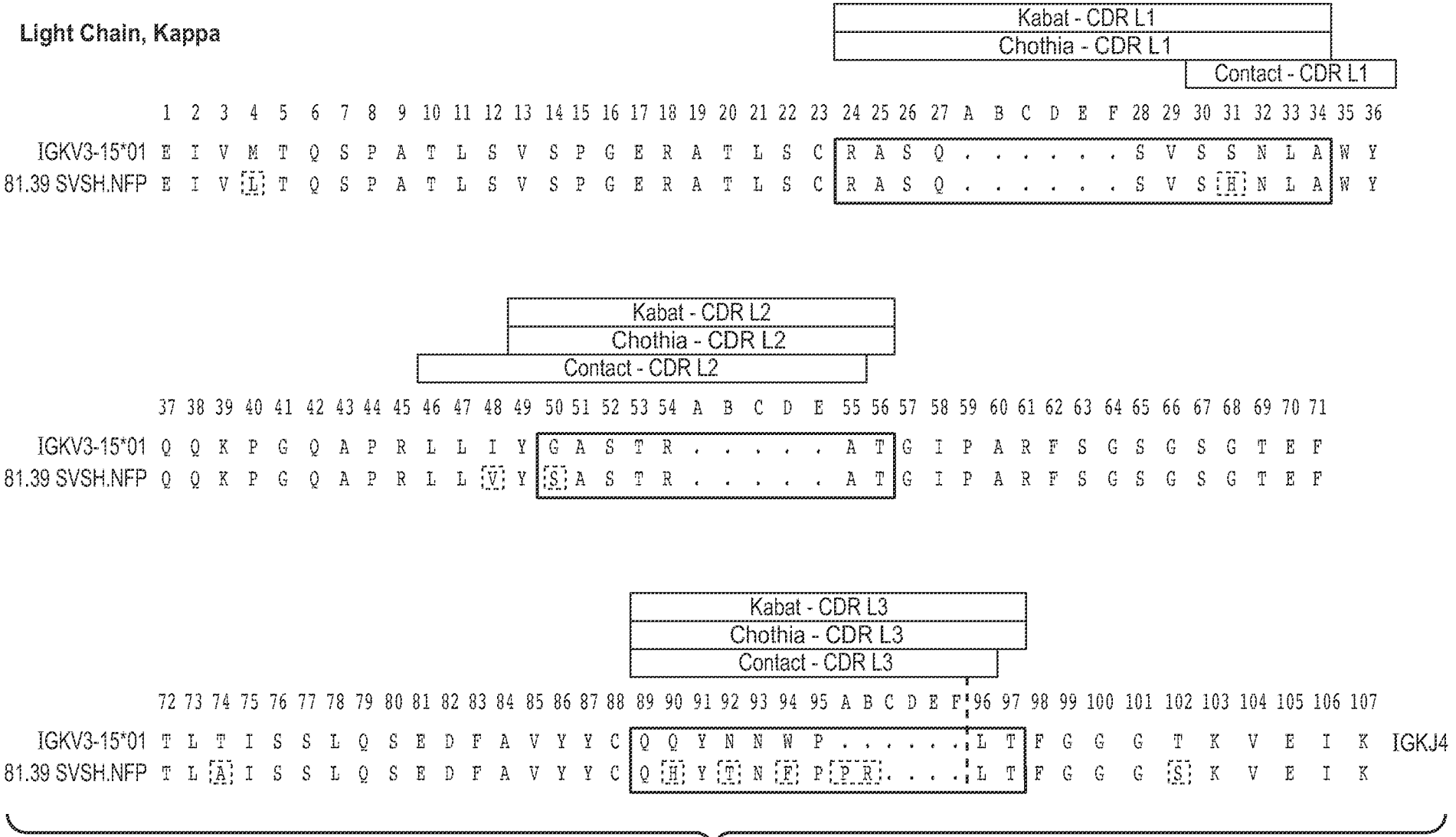

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
81.39 SVSH.NFP E I V L T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S H N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
81.39 SVSH.NFP Q Q K P G Q A P R L L V Y S A S T R . . . . . A T G I P A R F S G S G S G T E F
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . L T F G G G T K V E I K IGKJ4
81.39 SVSH.NFP T L A I S S L Q S E D F A V Y Y C Q H Y T N F P P R . . . . . L T F G G G S K V E I K

FIG. 29A

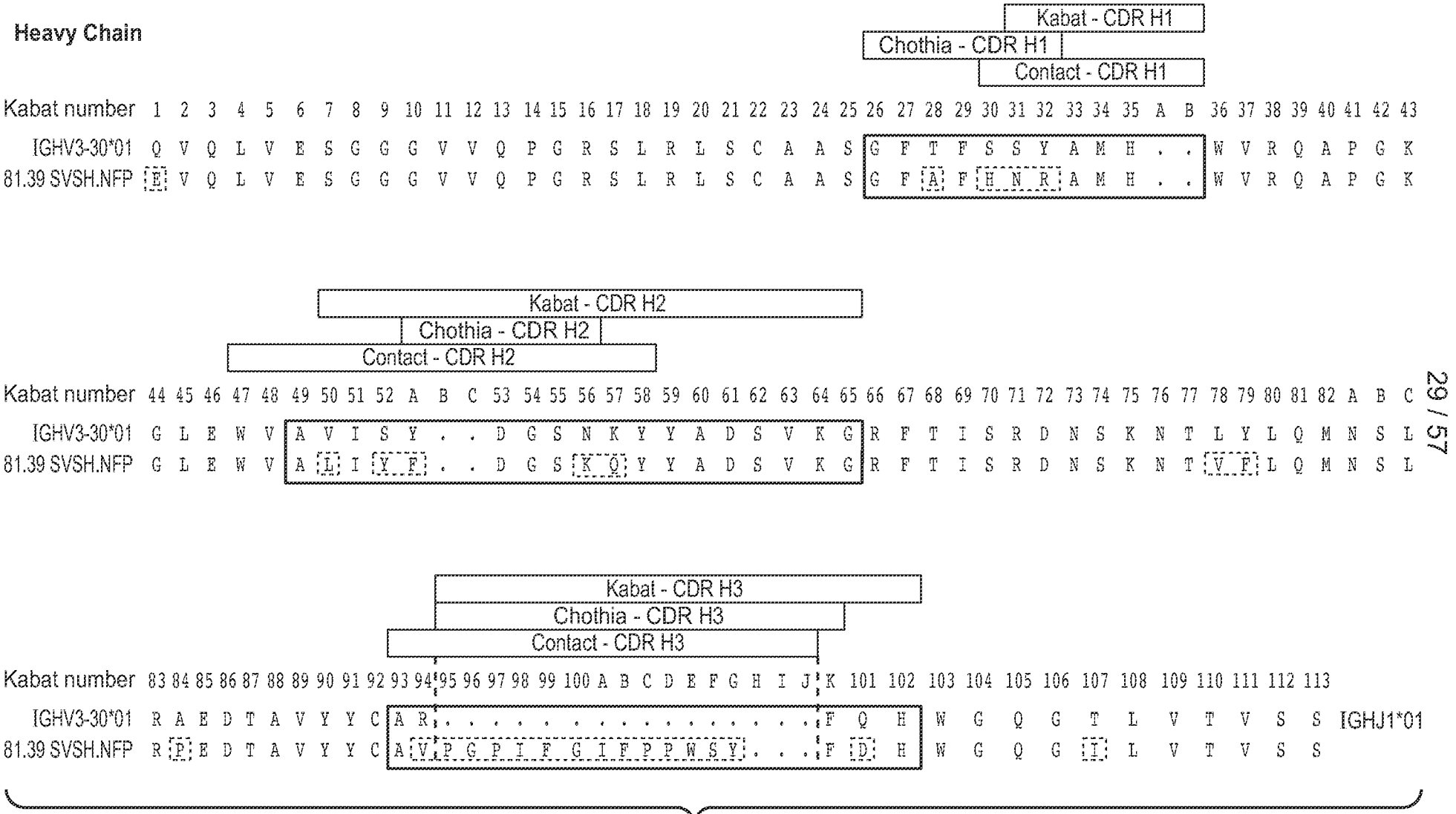

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 SVSH.NFP E V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 SVSH.NFP G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 SVSH.NFP R P E D T A V Y Y C A V P G P I F G I F P P W S Y . . . F D H W G Q G I L V T V S S

FIG. 29B

Light Chain, Kappa

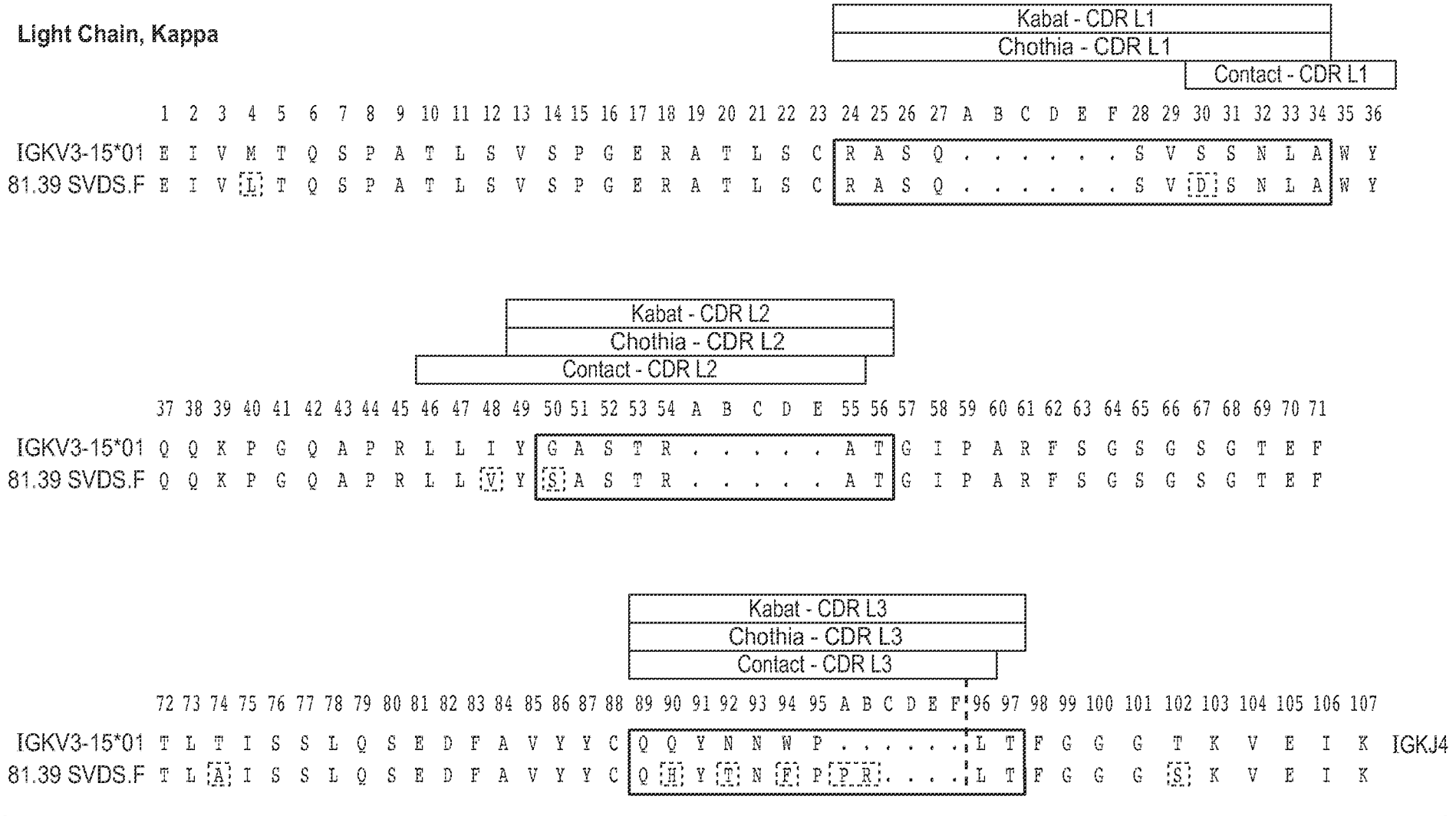


FIG. 30A

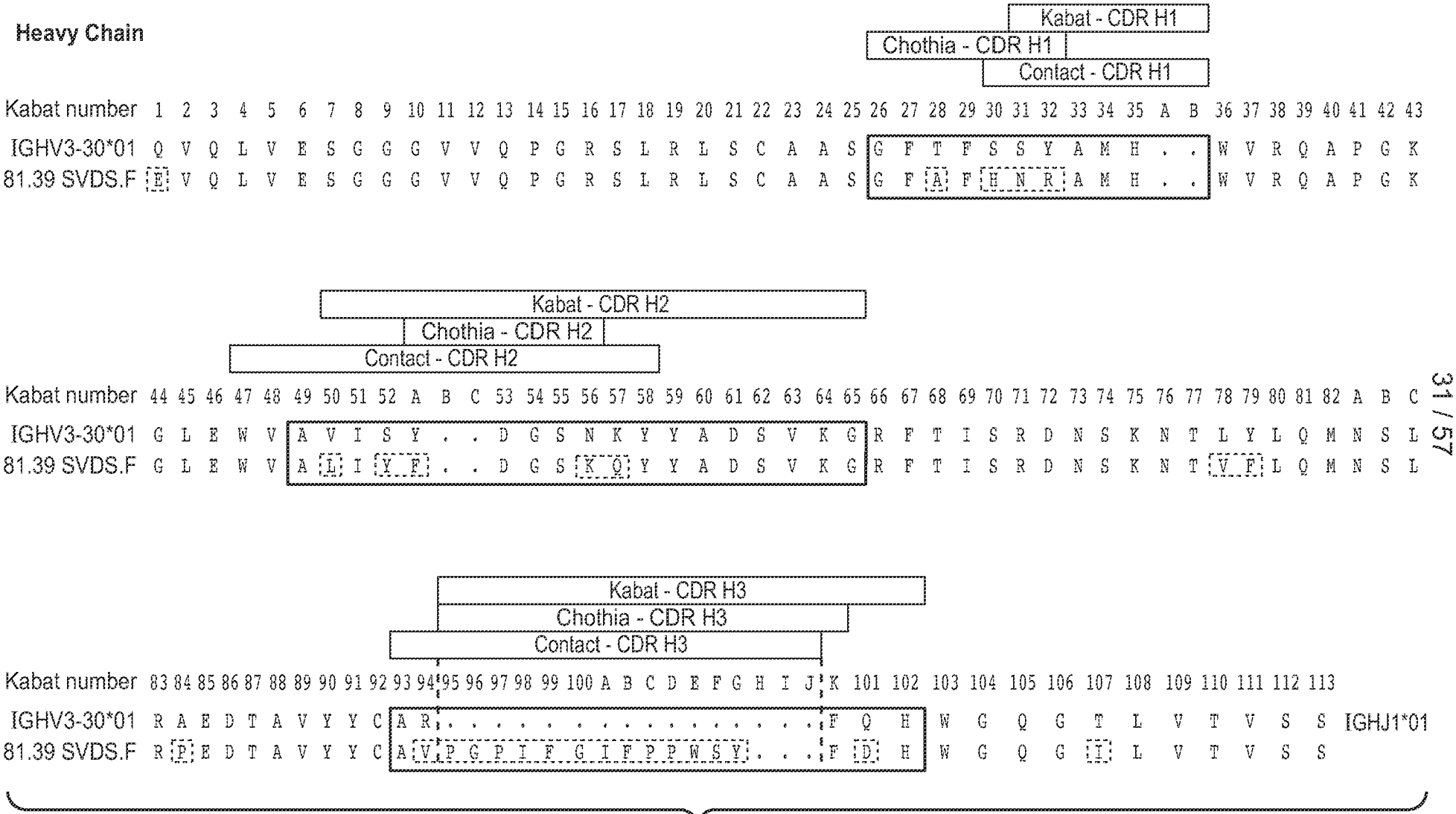

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 SVDS.F E V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 SVDS.F G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 SVDS.F R P E D T A V Y Y C A V P G P I F G I F P P W S Y . . . F D H W G Q G I L V T V S S

FIG. 30B

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
IGKV3-15*01
81.39 SVDS.Y
IGKJ4

FIG. 31A

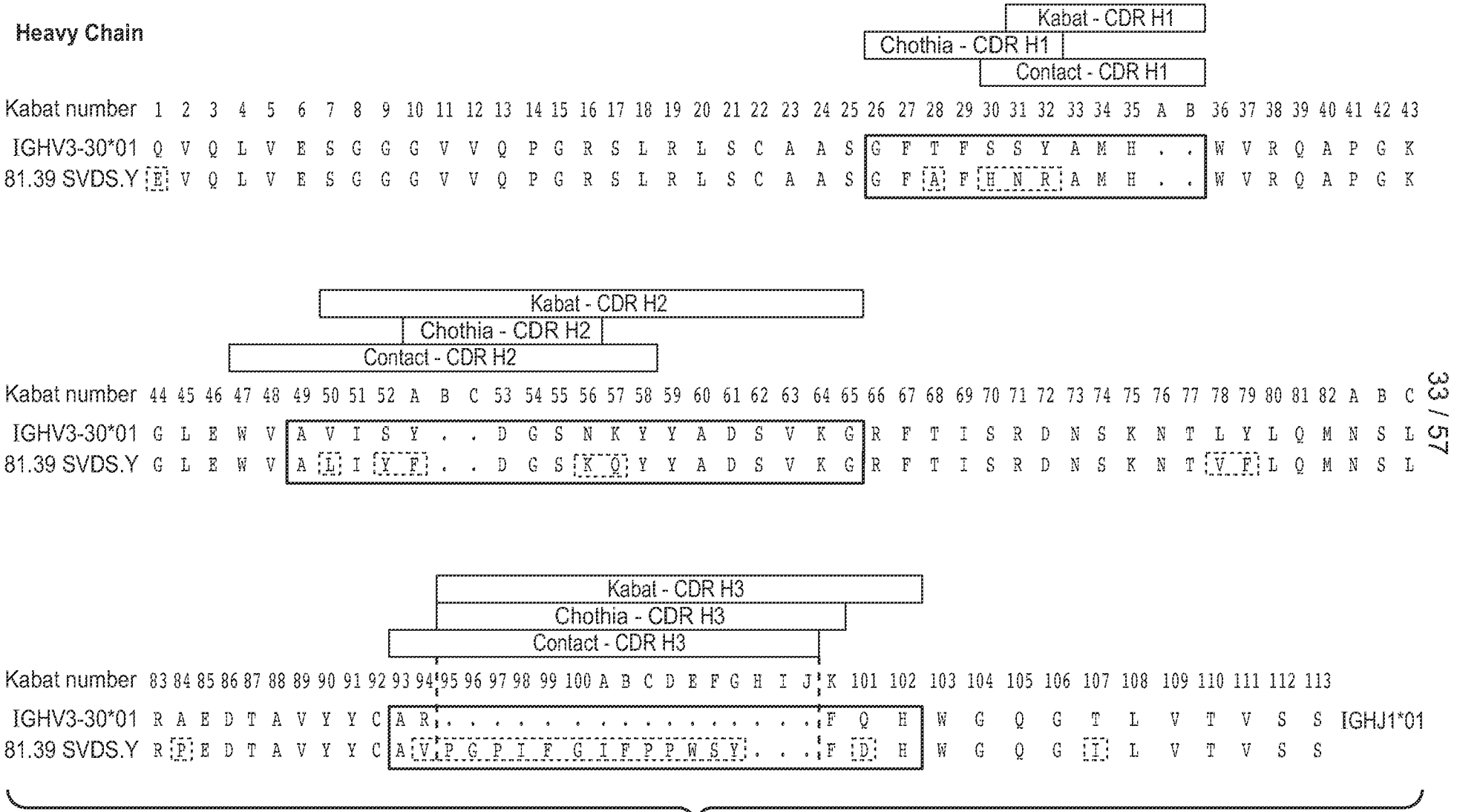

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
81.39 SVDS.Y E V Q L V E S G G G V V Q P G R S L R L S C A A S G F A F H N R A M H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
81.39 SVDS.Y G L E W V A L I Y F . . D G S K Q Y Y A D S V K G R F T I S R D N S K N T V F L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
81.39 SVDS.Y R P E D T A V Y Y C A V P G P I F G I F P P W S Y . . . F D H W G Q G I L V T V S S

FIG. 31B

Light Chain, Kappa

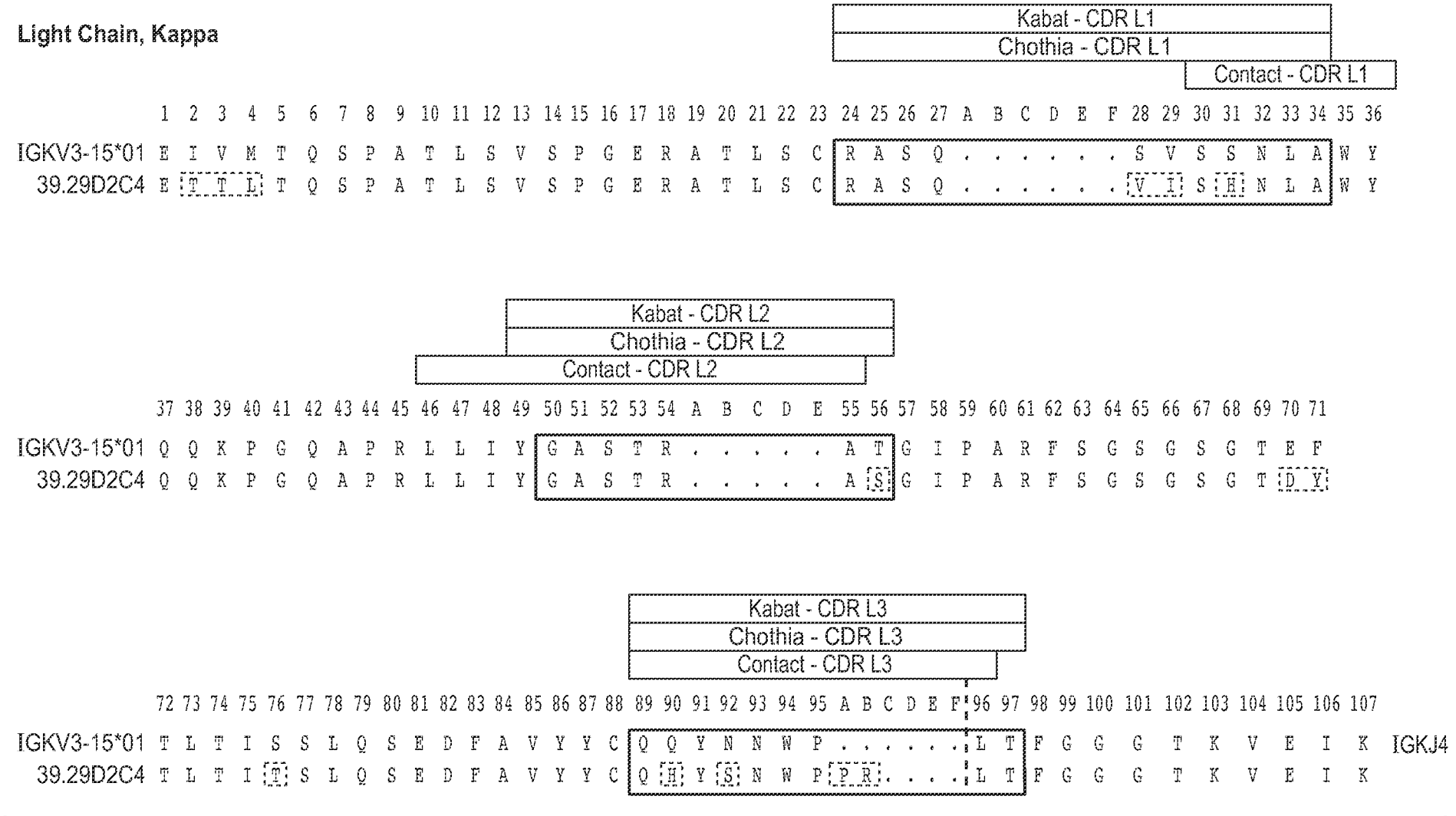


FIG. 32A

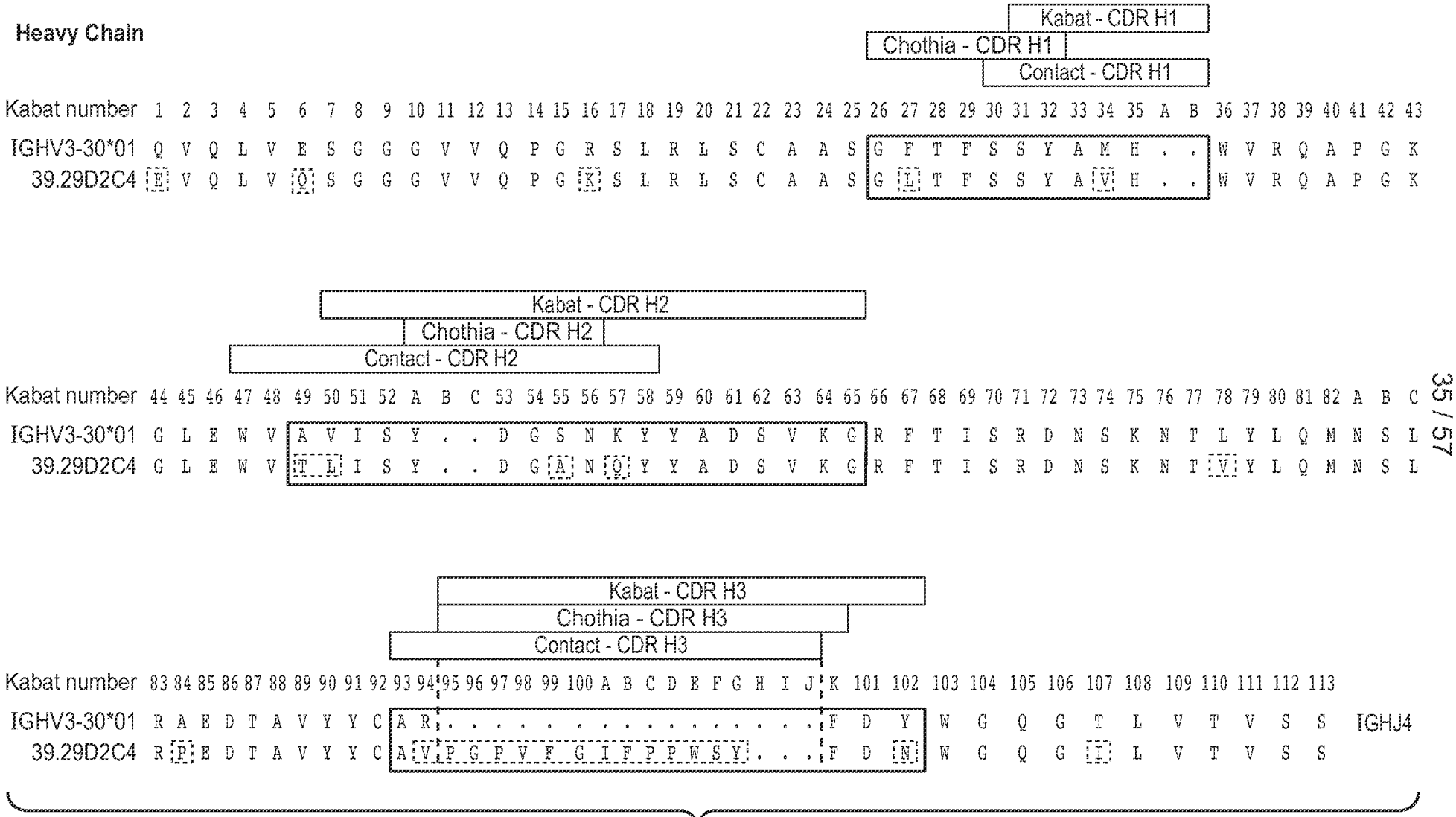

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
39.29D2C4 E V Q L V Q S G G G V V Q P G K S L R L S C A A S G L T F S S Y A V H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
39.29D2C4 G L E W V T L I S Y . . D G A N Q Y Y A D S V K G R F T I S R D N S K N T V Y L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F D Y W G Q G T L V T V S S IGHJ4
39.29D2C4 R P E D T A V Y Y C A V P G P V F G I F P P W S Y . . . F D N W G Q G I L V T V S S

FIG. 32B

Light Chain, Kappa

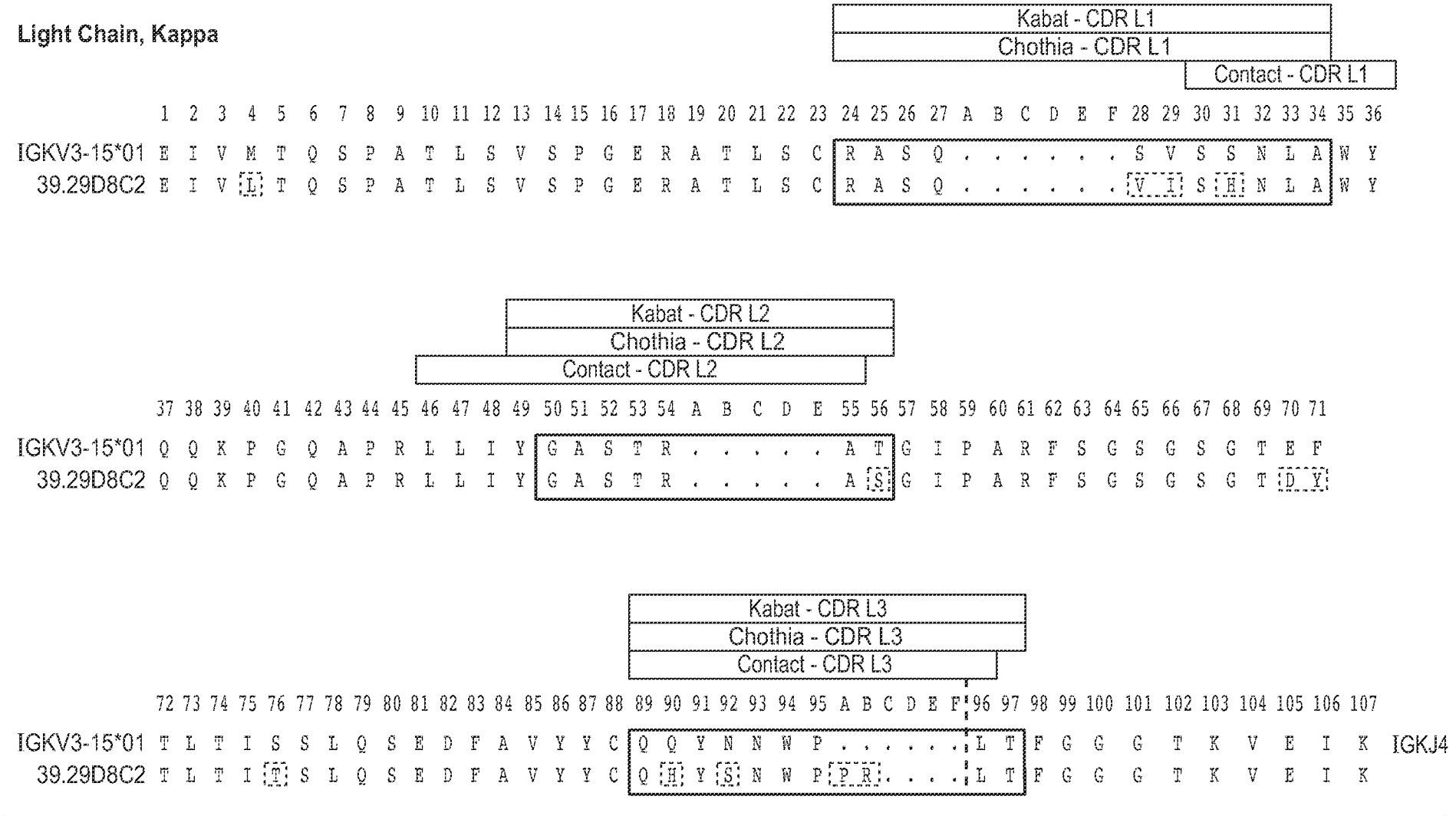


FIG. 33A

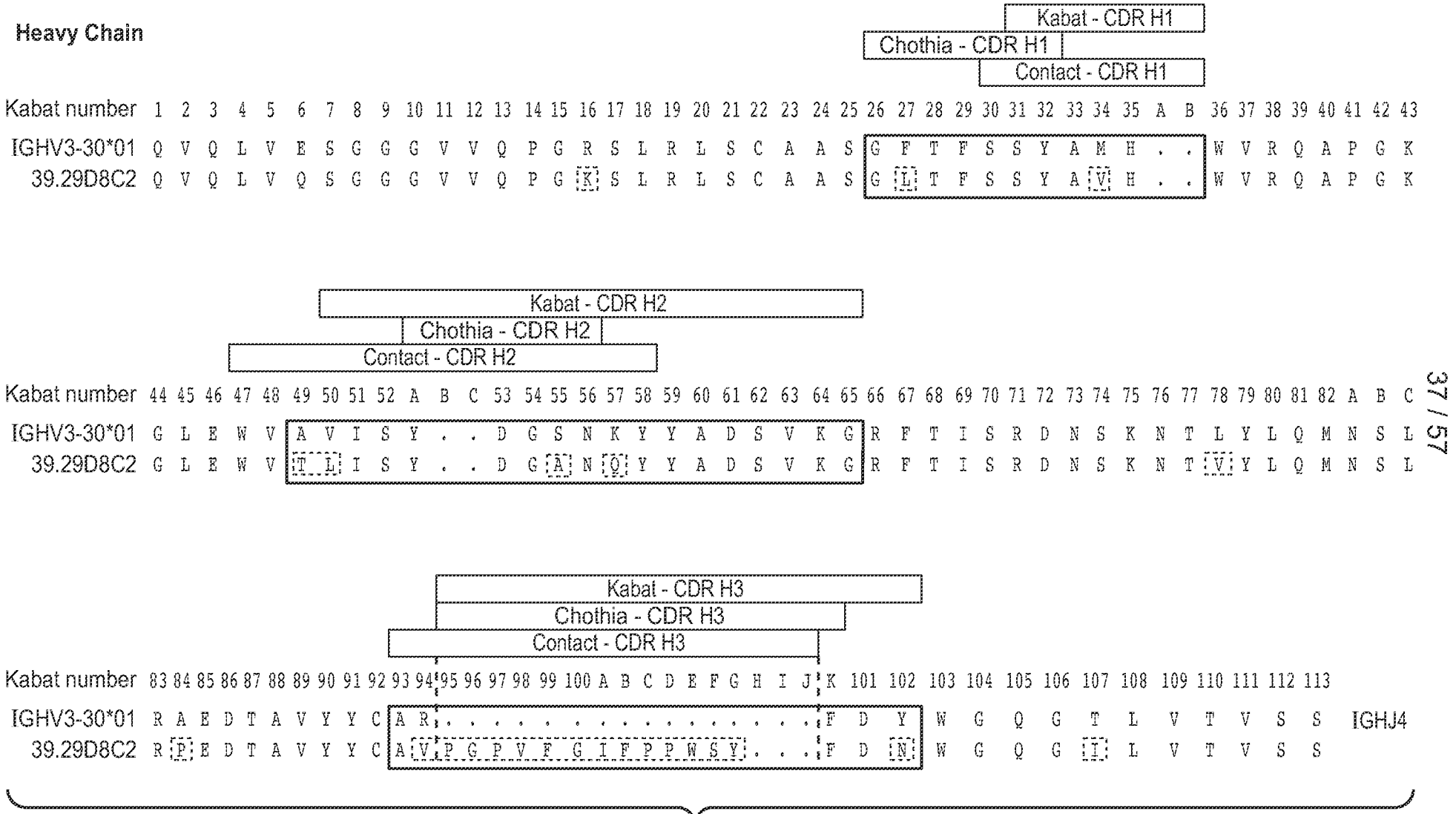

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
39.29D8C2 Q V Q L V Q S G G G V V Q P G K S L R L S C A A S G L T F S S Y A V H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
39.29D8C2 G L E W V T L I S Y . . D G A N Q Y Y A D S V K G R F T I S R D N S K N T V Y L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F D Y W G Q G T L V T V S S IGHJ4
39.29D8C2 R P E D T A V Y Y C A V P G P V F G I F P P W S Y . . . F D N W G Q G I L V T V S S

FIG. 33B

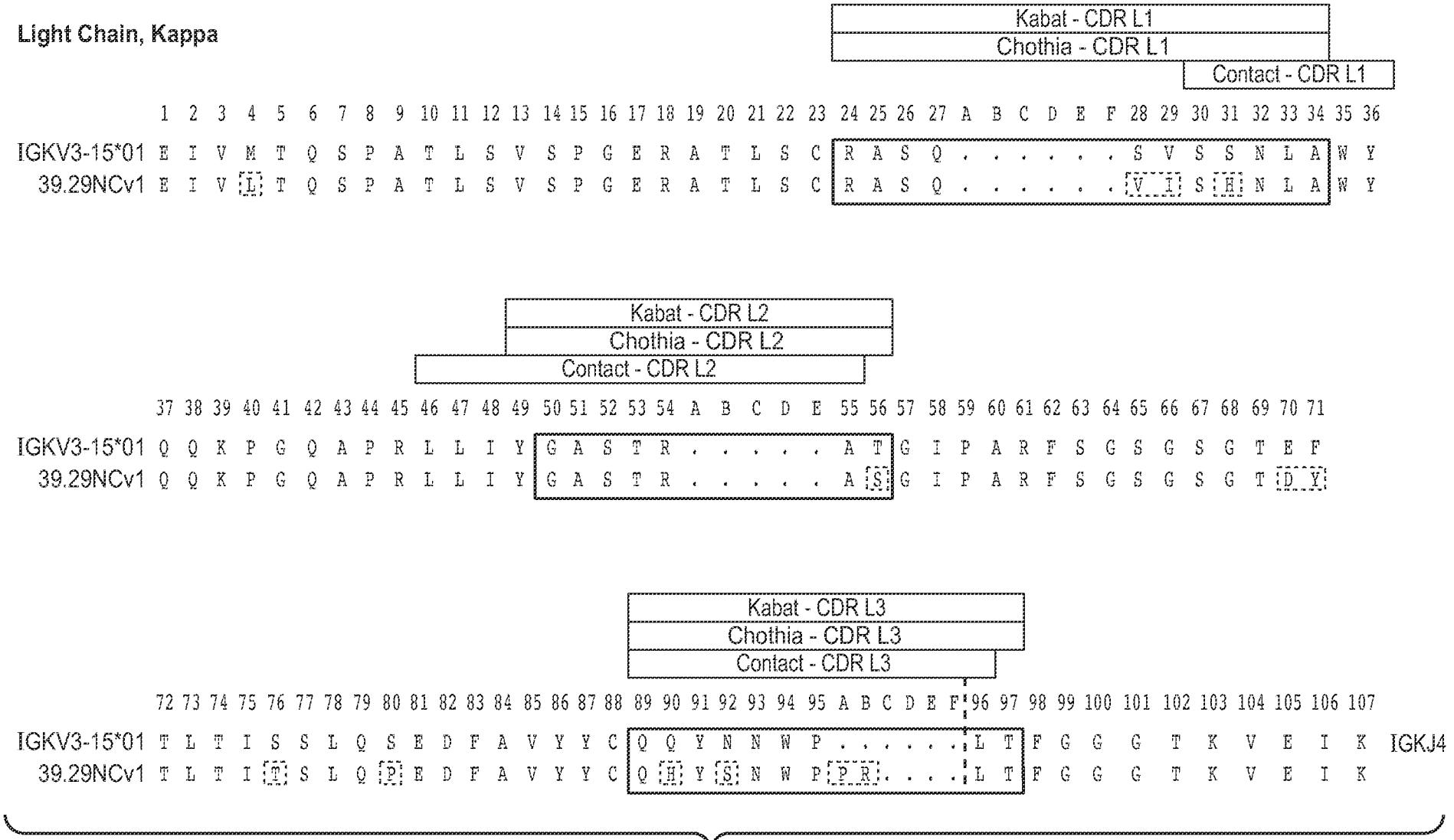

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
39.29NCv1 E I V L T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . V I S H N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
39.29NCv1 Q Q K P G Q A P R L L I Y G A S T R . . . . . A S G I P A R F S G S G S G T D Y
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . L T F G G G T K V E I K IGKJ4
39.29NCv1 T L T I T S L Q P E D F A V Y Y C Q H Y S N W P P R . . . . L T F G G G T K V E I K

FIG. 34A

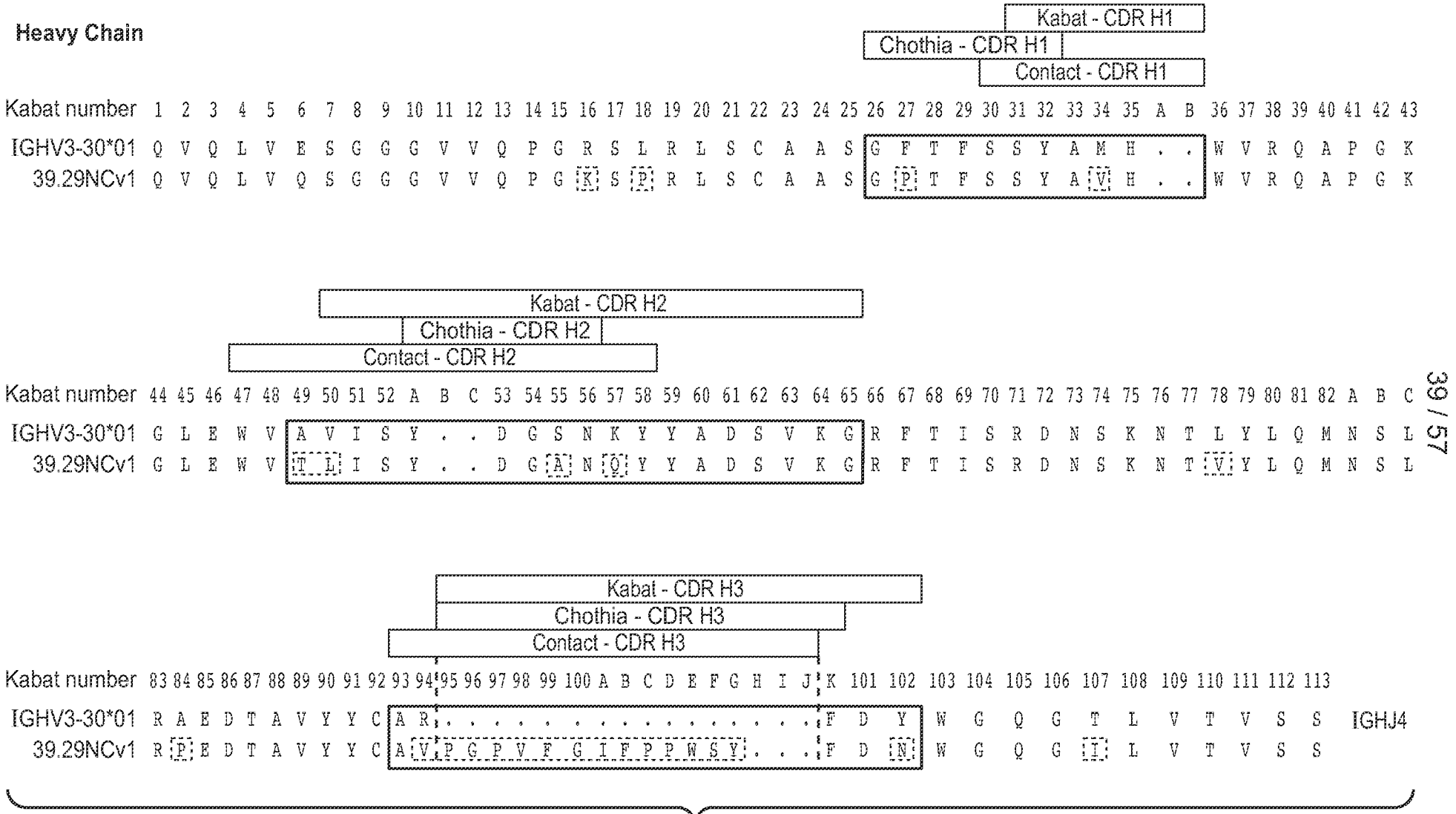

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
39.29NCv1 Q V Q L V Q S G G G V V Q P G K S P R L S C A A S G P T F S S Y A V H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
39.29NCv1 G L E W V T L I S Y . . D G A N Q Y Y A D S V K G R F T I S R D N S K N T V Y L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F D Y W G Q G T L V T V S S IGHJ4
39.29NCv1 R P E D T A V Y Y C A V P G P V F G I F P P W S Y . . . F D N W G Q G I L V T V S S

FIG. 34B

Light Chain, Kappa

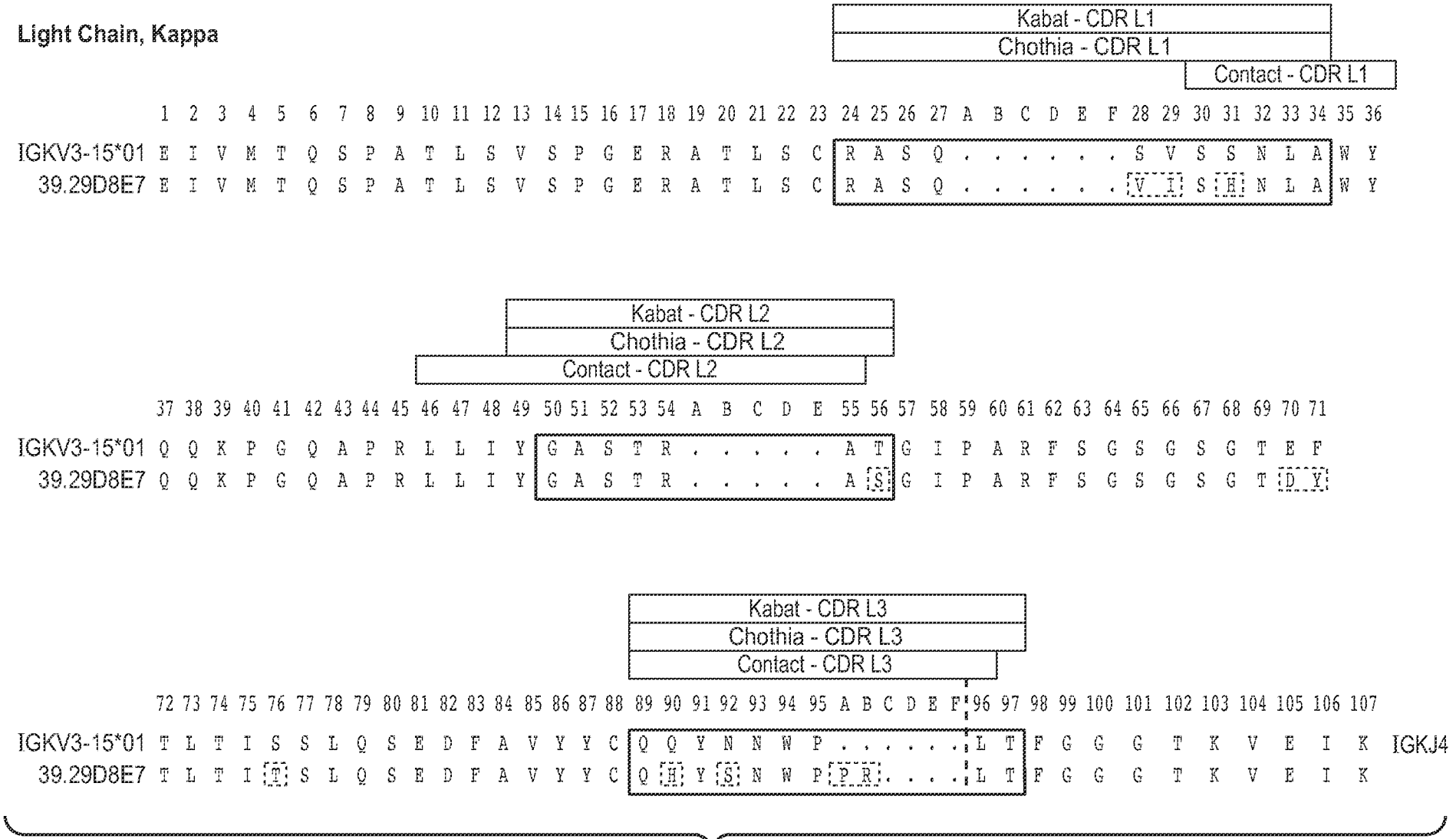


FIG. 35A

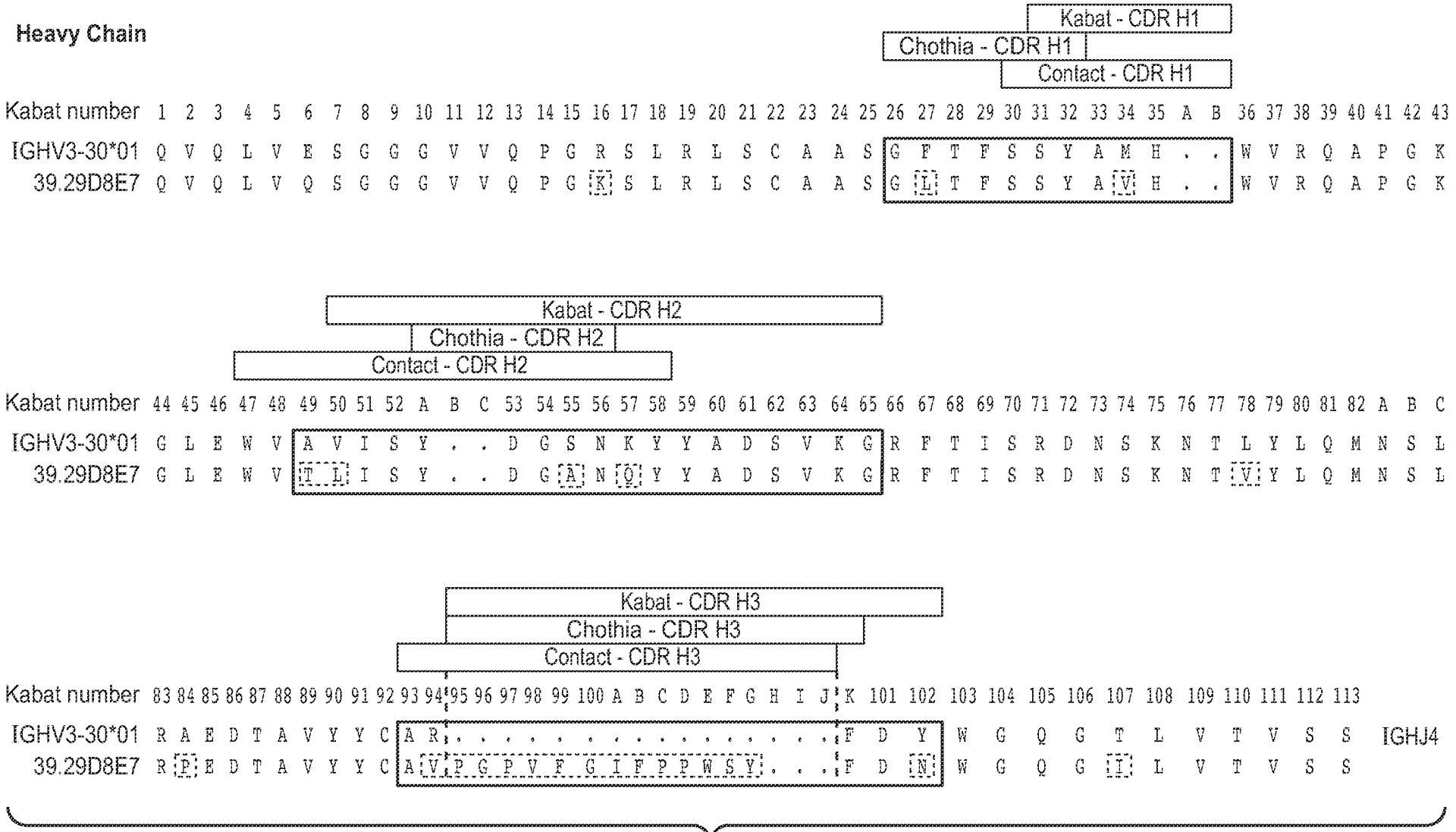

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
39.29D8E7 Q V Q L V Q S G G G V V Q P G K S L R L S C A A S G L T F S S Y A V H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
39.29D8E7 G L E W V T L I S Y . . D G A N Q Y Y A D S V K G R F T I S R D N S K N T V Y L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F D Y W G Q G T L V T V S S IGHJ4
39.29D8E7 R P E D T A V Y Y C A V P G P V F G I F P P W S Y . . . F D N W G Q G I L V T V S S

FIG. 35B

Light Chain, Kappa

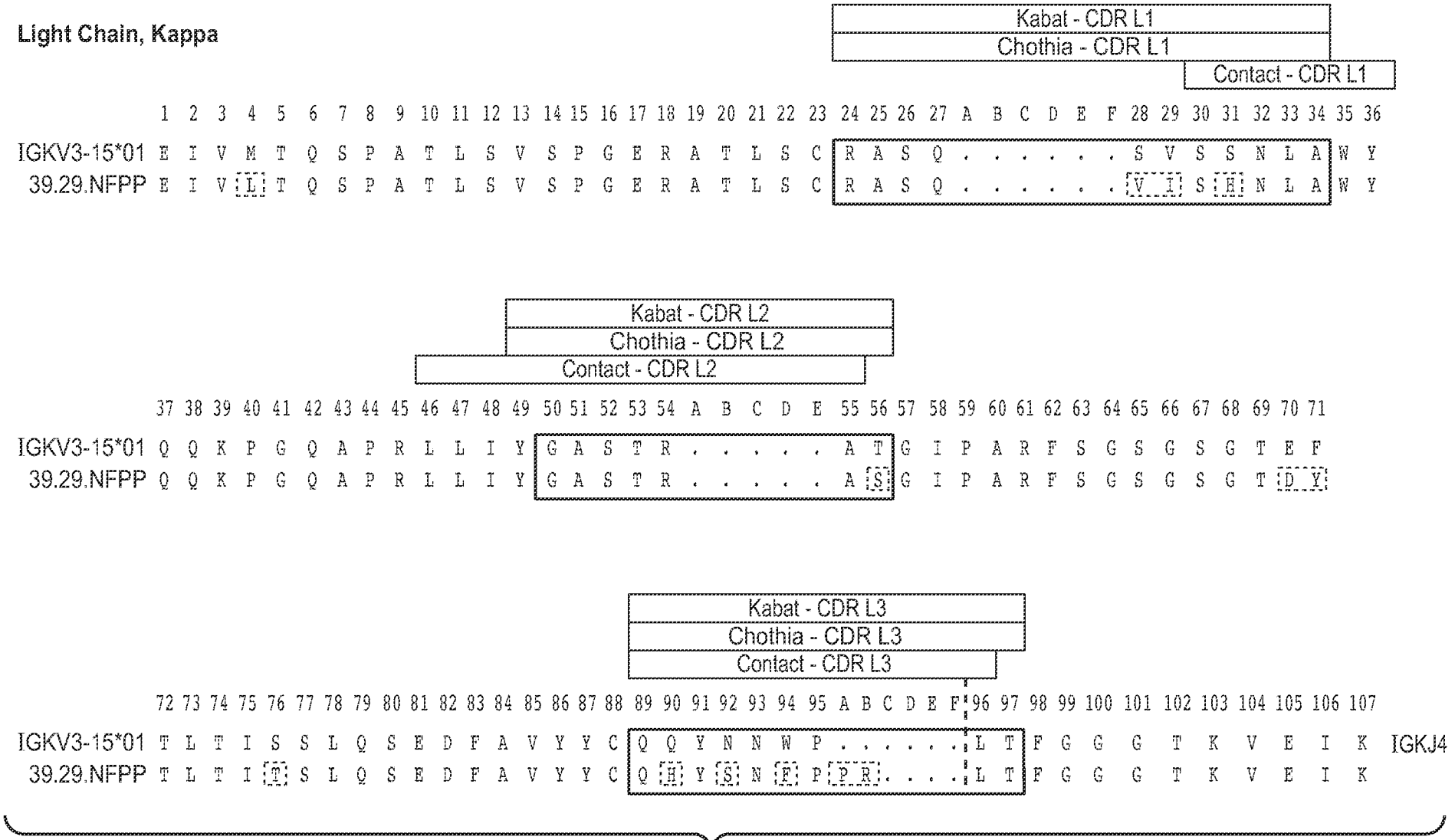


FIG. 36A

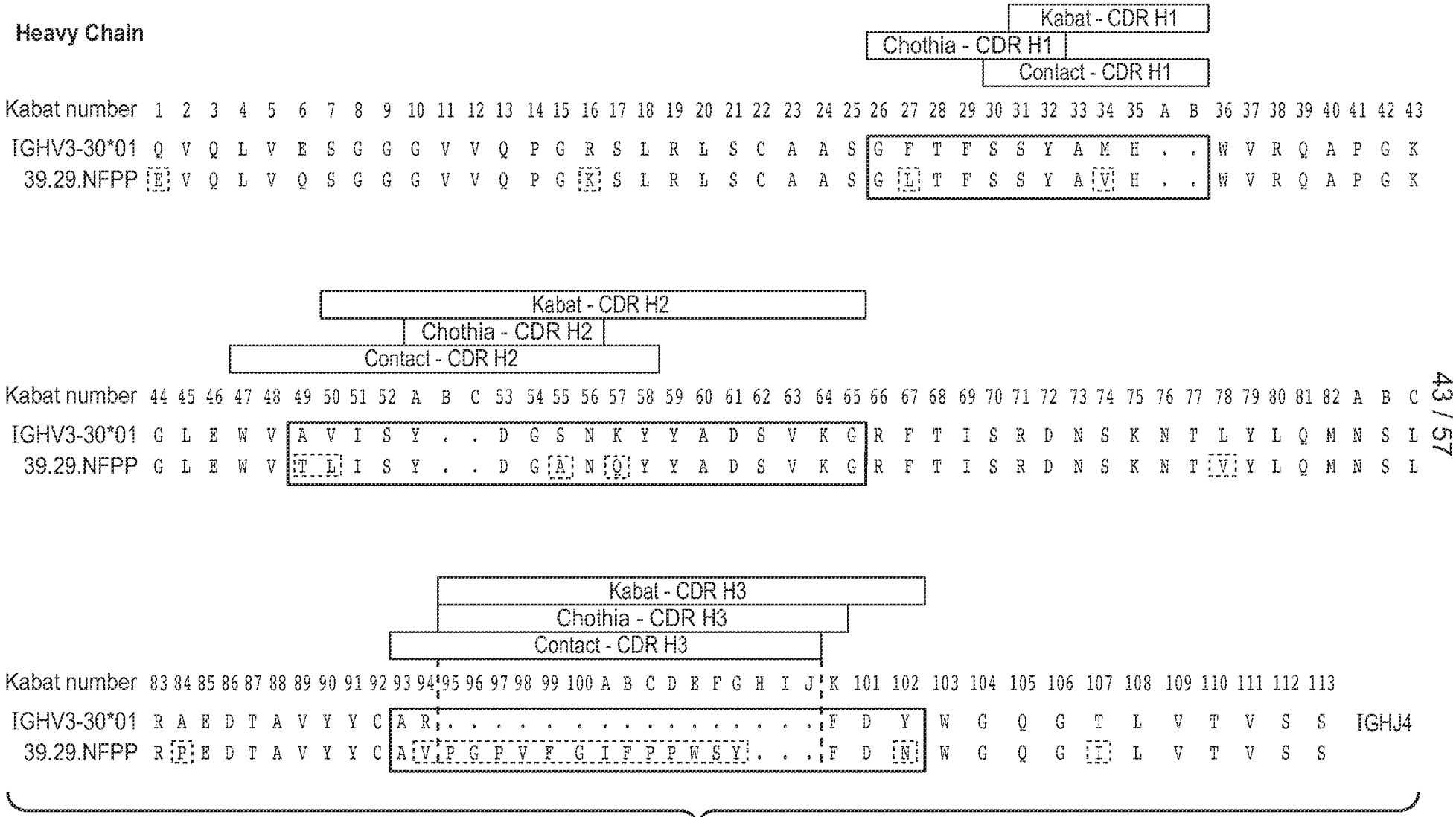

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
39.29.NFPP E V Q L V Q S G G G V V Q P G K S L R L S C A A S G L T F S S Y A V H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
39.29.NFPP G L E W V T L I S Y . . D G A N Q Y Y A D S V K G R F T I S R D N S K N T V Y L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F D Y W G Q G T L V T V S S IGHJ4
39.29.NFPP R P E D T A V Y Y C A V P G P V F G I F P P W S Y . . . F D N W G Q G I L V T V S S

FIG. 36B

Light Chain, Kappa

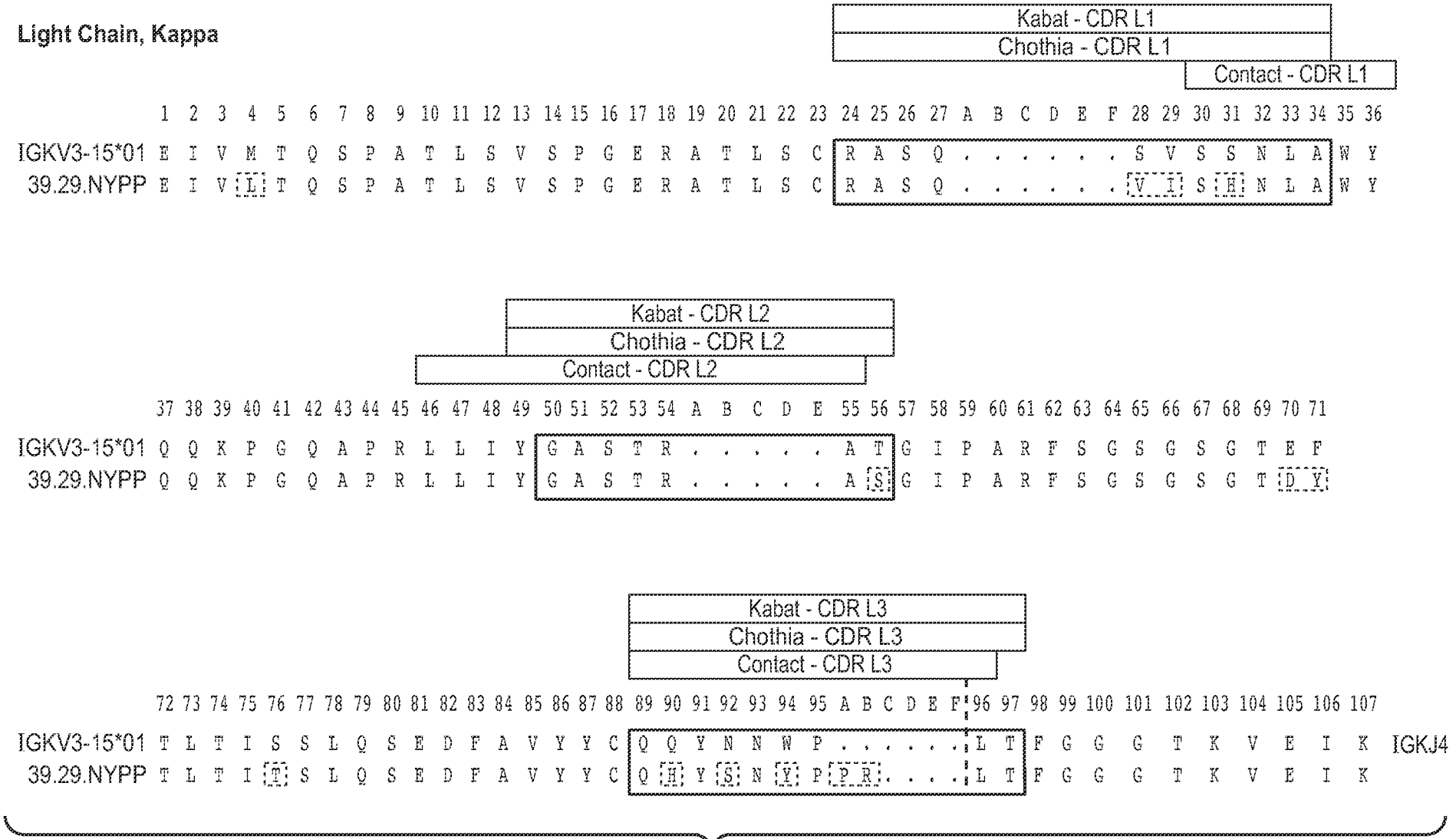


FIG. 37A

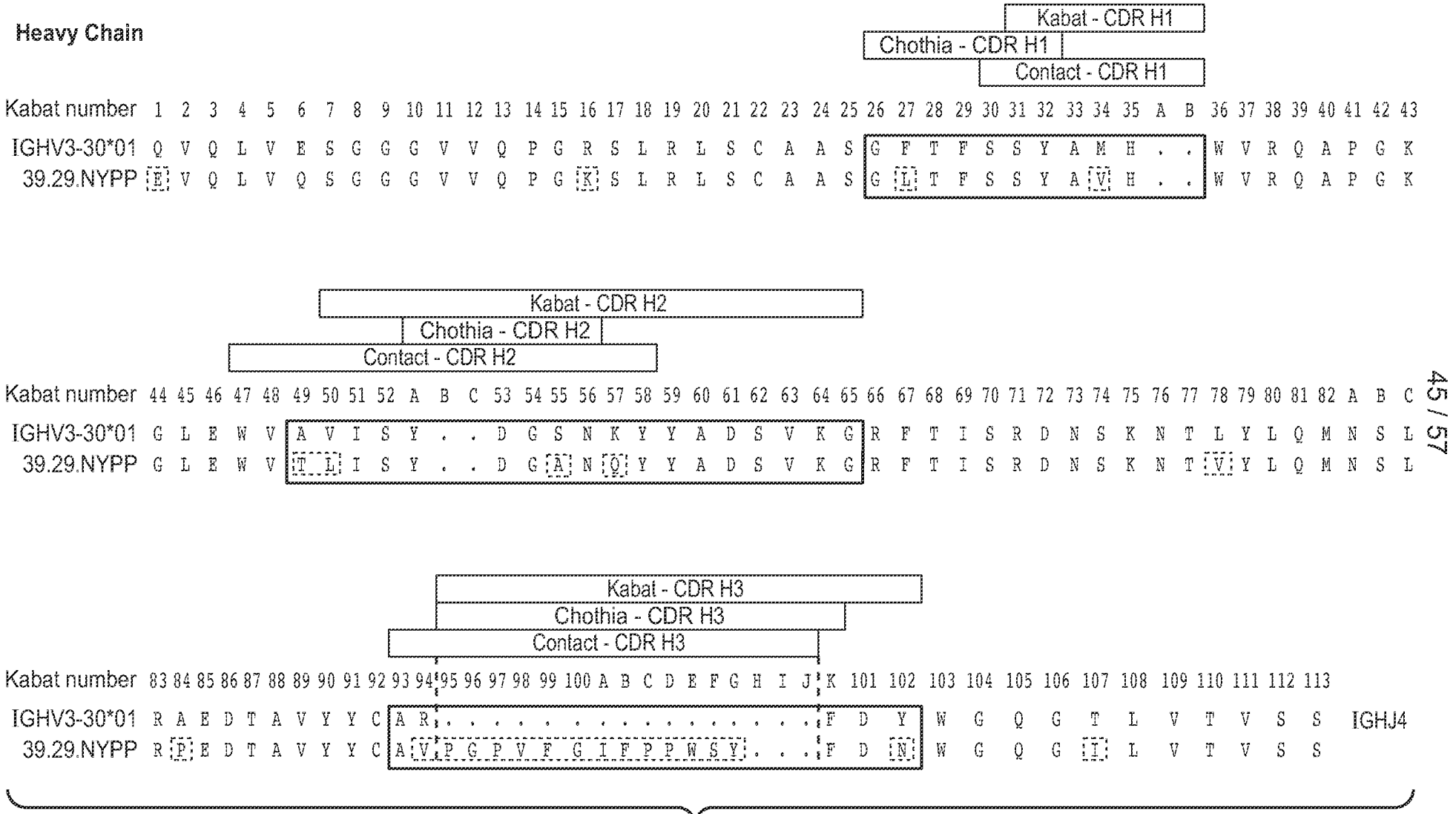

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
39.29.NYPP E V Q L V Q S G G G V V Q P G K S L R L S C A A S G L T F S S Y A V H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
39.29.NYPP G L E W V T L I S Y . . D G A N Q Y Y A D S V K G R F T I S R D N S K N T V Y L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F D Y W G Q G T L V T V S S IGHJ4
39.29.NYPP R P E D T A V Y Y C A V P G P V F G I F P P W S Y . . . F D N W G Q G I L V T V S S

FIG. 37B

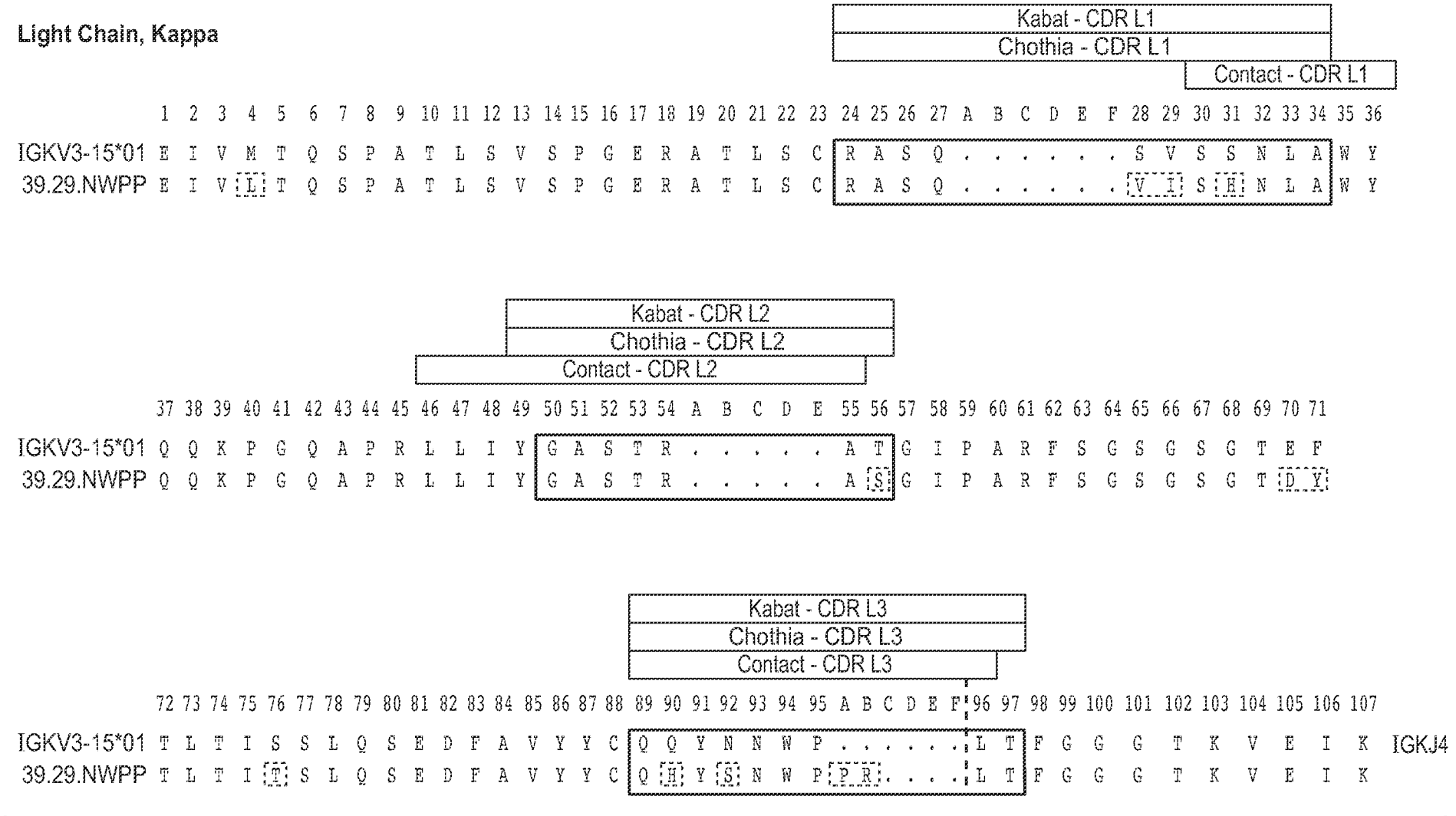

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
39.29.NWPP E I V L T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . V I S H N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
39.29.NWPP Q Q K P G Q A P R L L I Y G A S T R . . . . . A S G I P A R F S G S G S G T D Y
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . L T F G G G T K V E I K IGKJ4
39.29.NWPP T L T I T S L Q S E D F A V Y Y C Q H Y S N W P P R . . . . L T F G G G T K V E I K

FIG. 38A

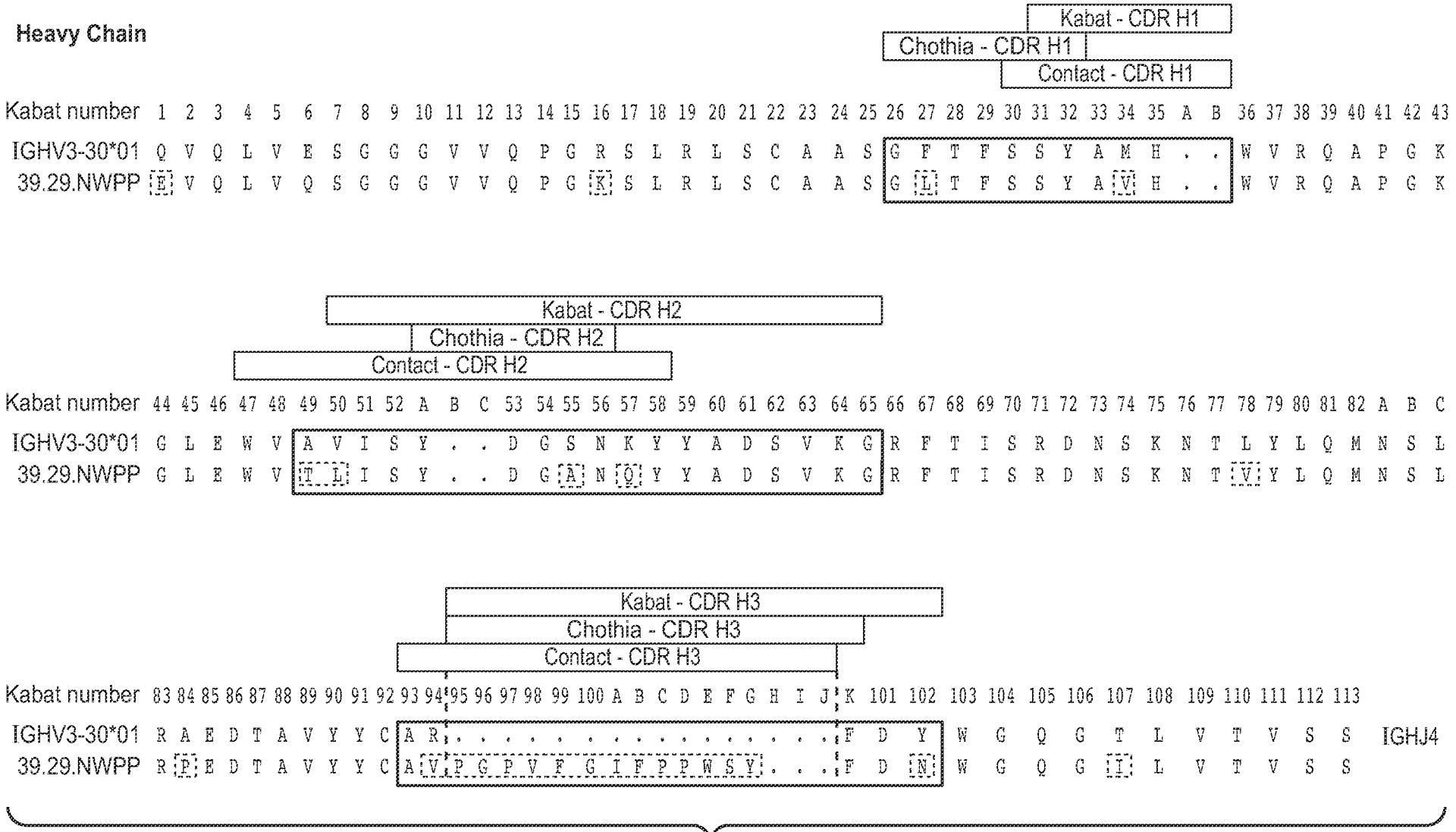

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV3-30*01 Q V Q L V E S G G G V V Q P G R S L R L S C A A S G F T F S S Y A M H . . W V R Q A P G K
39.29.NWPP E V Q L V Q S G G G V V Q P G K S L R L S C A A S G L T F S S Y A V H . . W V R Q A P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV3-30*01 G L E W V A V I S Y . . D G S N K Y Y A D S V K G R F T I S R D N S K N T L Y L Q M N S L
39.29.NWPP G L E W V T L I S Y . . D G A N Q Y Y A D S V K G R F T I S R D N S K N T V Y L Q M N S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV3-30*01 R A E D T A V Y Y C A R . . . . . F D Y W G Q G T L V T V S S IGHJ4
39.29.NWPP R P E D T A V Y Y C A V P G P V F G I F P P W S Y . . . F D N W G Q G I L V T V S S

FIG. 38B

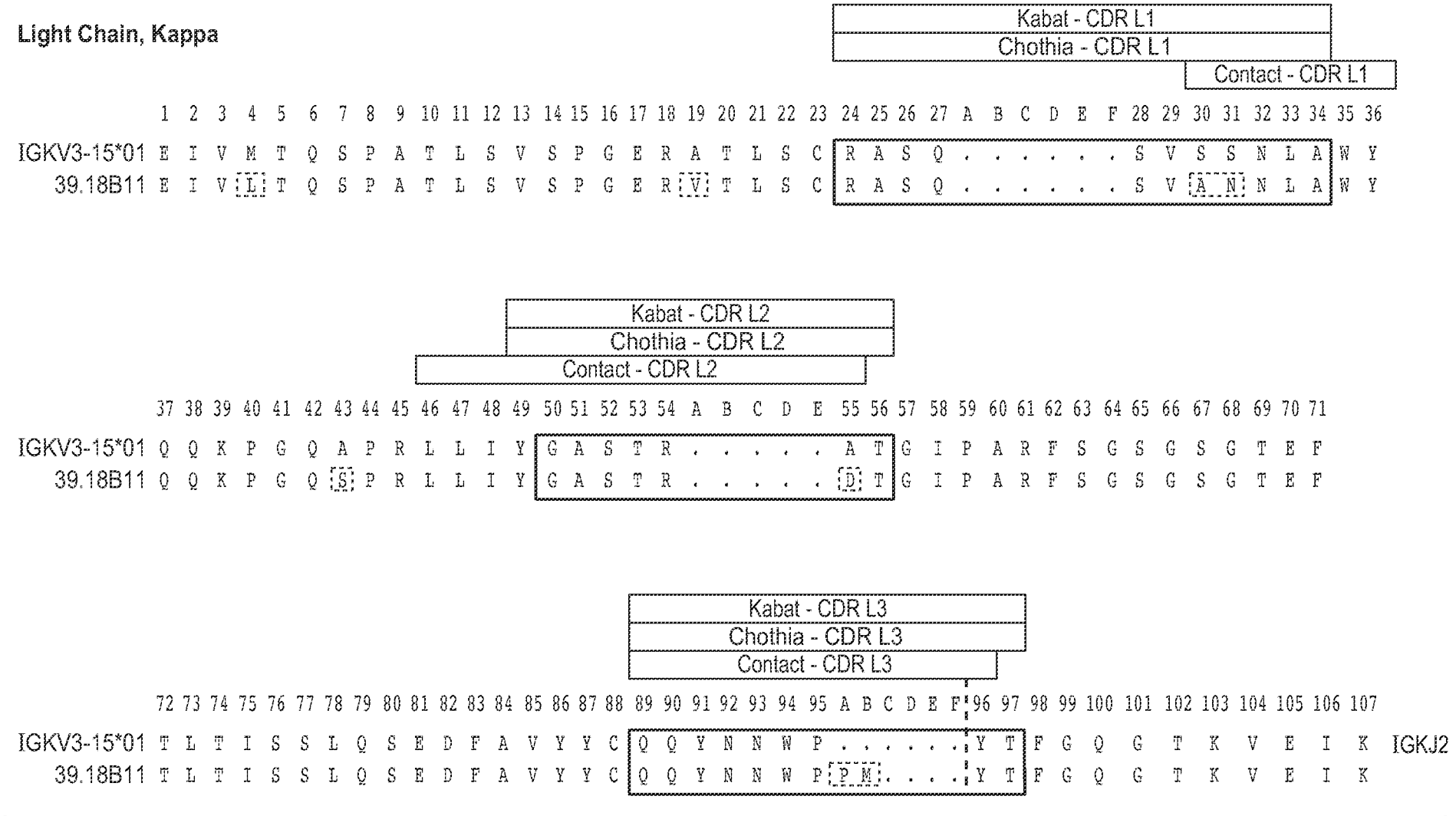

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
39.18B11 E I V L T Q S P A T L S V S P G E R V T L S C R A S Q . . . . . S V A N N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
39.18B11 Q Q K P G Q S P R L L I Y G A S T R . . . . . D T G I P A R F S G S G S G T E F
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . Y T F G Q G T K V E I K IGKJ2
39.18B11 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P P M . . . . Y T F G Q G T K V E I K

FIG. 39A

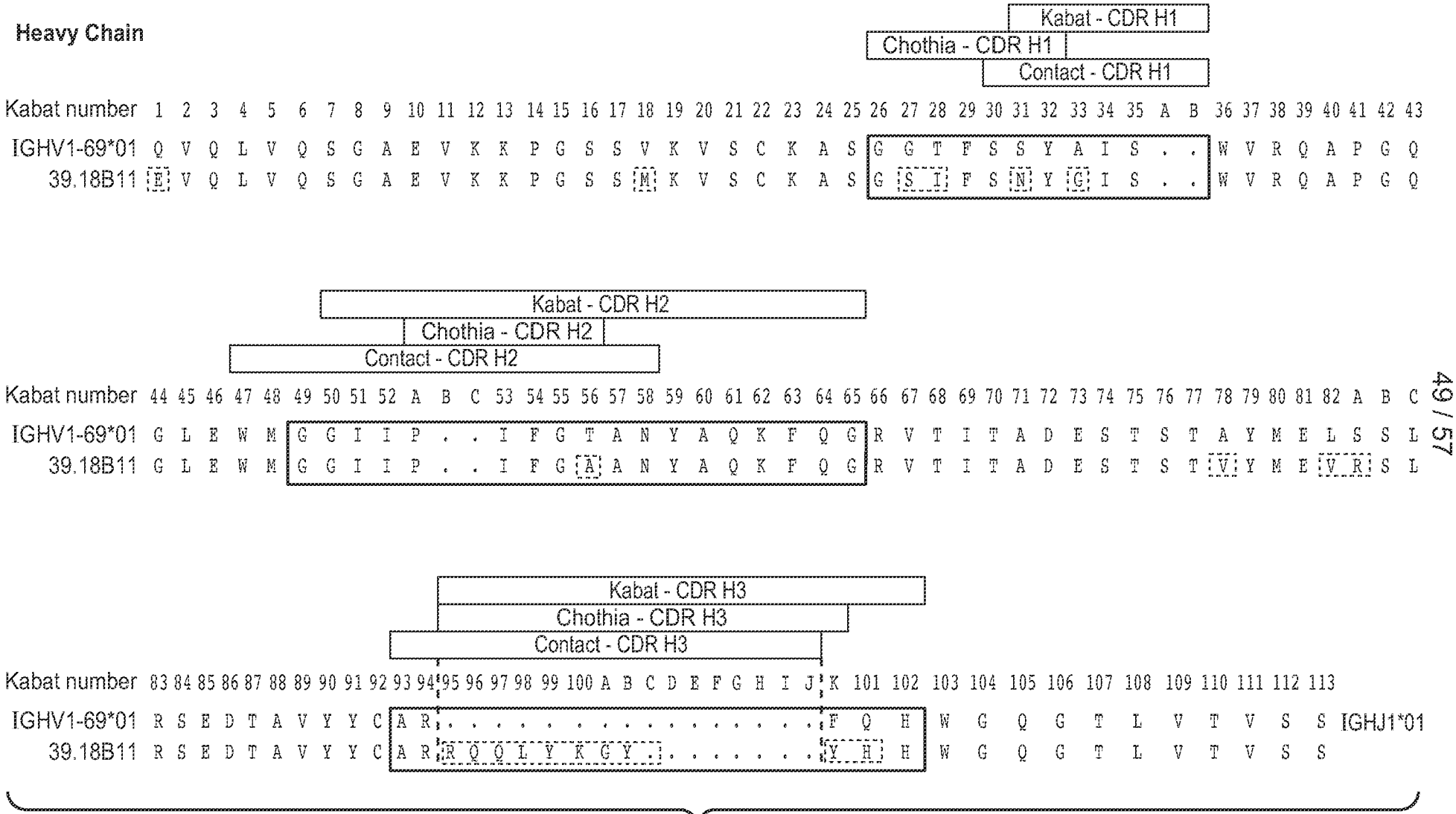

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV1-69*01 Q V Q L V Q S G A E V K K P G S S V K V S C K A S G G T F S S Y A I S . . W V R Q A P G Q
39.18B11 E V Q L V Q S G A E V K K P G S S M K V S C K A S G S I F S N Y G I S . . W V R Q A P G Q
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV1-69*01 G L E W M G G I I P . . I F G T A N Y A Q K F Q G R V T I T A D E S T S T A Y M E L S S L
39.18B11 G L E W M G G I I P . . I F G A A N Y A Q K F Q G R V T I T A D E S T S T V Y M E V R S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV1-69*01 R S E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
39.18B11 R S E D T A V Y Y C A R R Q Q L Y K G Y . . . . . Y H H W G Q G T L V T V S S

FIG. 39B

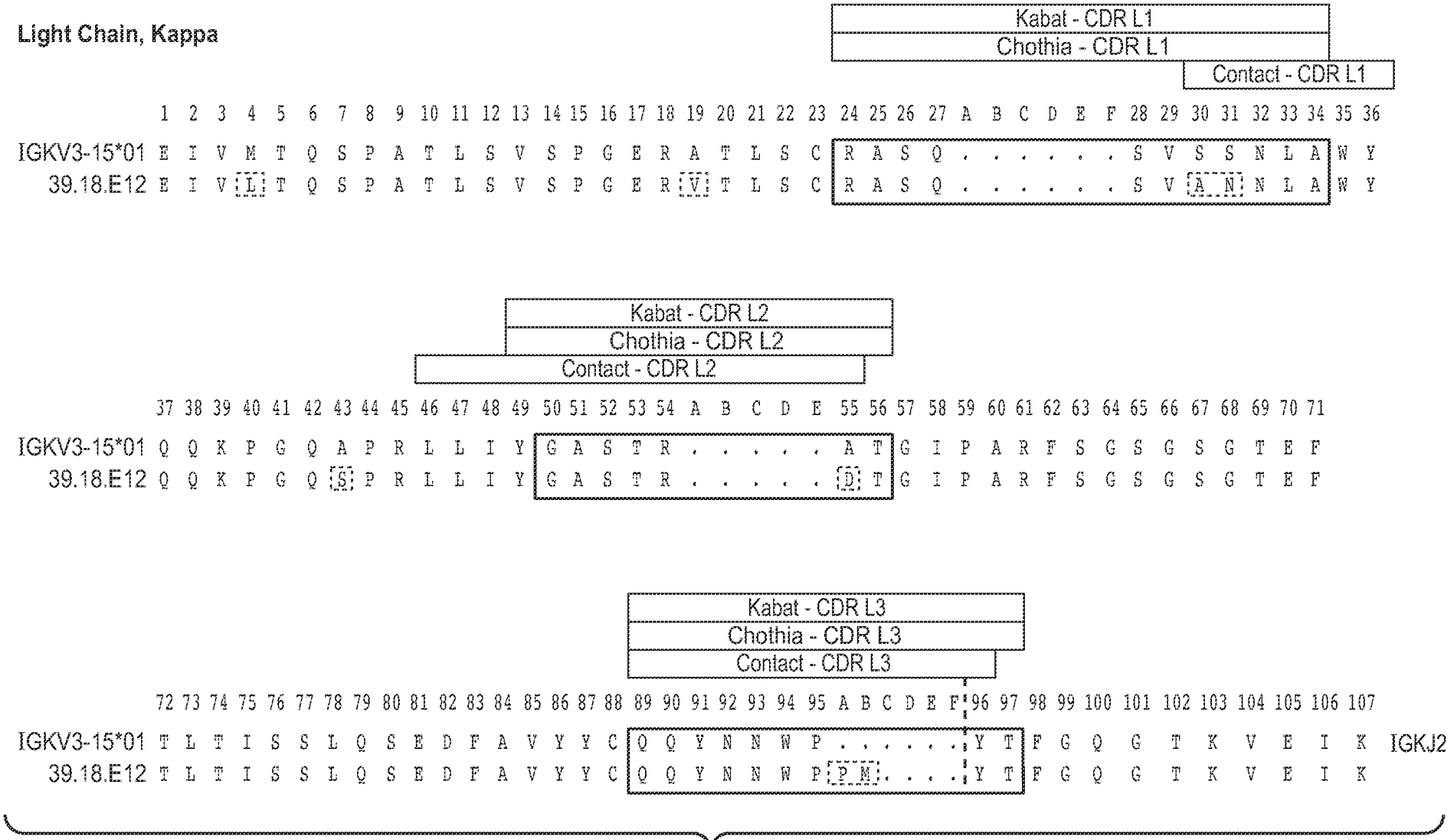

Light Chain, Kappa
Kabat - CDR L1
Chothia - CDR L1
Contact - CDR L1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 A B C D E F 28 29 30 31 32 33 34 35 36
IGKV3-15*01 E I V M T Q S P A T L S V S P G E R A T L S C R A S Q . . . . . S V S S N L A W Y
39.18.E12 E I V L T Q S P A T L S V S P G E R V T L S C R A S Q . . . . . S V A N N L A W Y
Kabat - CDR L2
Chothia - CDR L2
Contact - CDR L2
37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 A B C D E 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71
IGKV3-15*01 Q Q K P G Q A P R L L I Y G A S T R . . . . . A T G I P A R F S G S G S G T E F
39.18.E12 Q Q K P G Q S P R L L I Y G A S T R . . . . . D T G I P A R F S G S G S G T E F
Kabat - CDR L3
Chothia - CDR L3
Contact - CDR L3
72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 A B C D E F 96 97 98 99 100 101 102 103 104 105 106 107
IGKV3-15*01 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P . . . . . Y T F G Q G T K V E I K IGKJ2
39.18.E12 T L T I S S L Q S E D F A V Y Y C Q Q Y N N W P P M . . . . Y T F G Q G T K V E I K

FIG. 40A

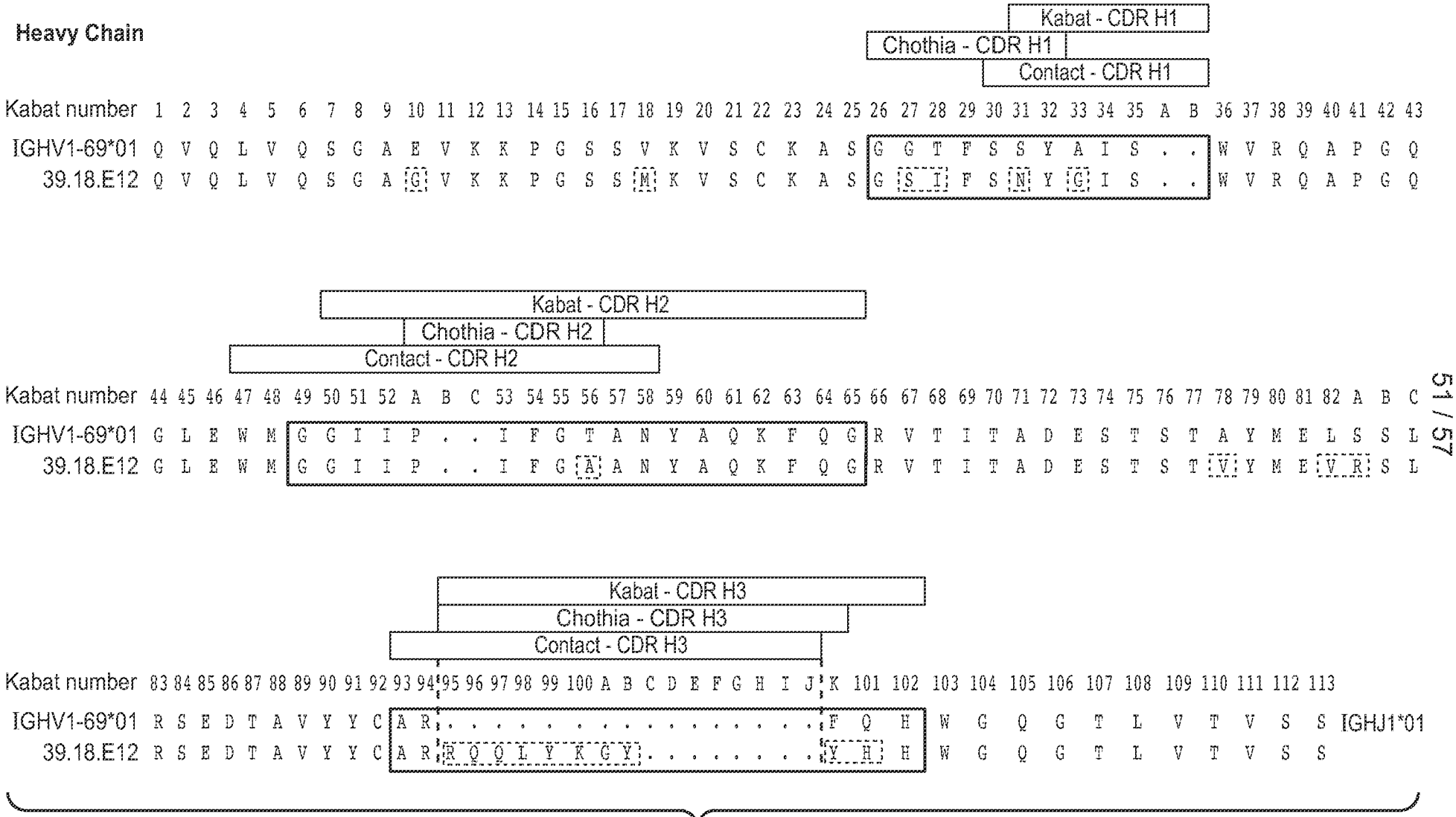

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV1-69*01 Q V Q L V Q S G A E V K K P G S S V K V S C K A S G G T F S S Y A I S . . W V R Q A P G Q
39.18.E12 Q V Q L V Q S G A G V K K P G S S M K V S C K A S G S I F S N Y G I S . . W V R Q A P G Q
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV1-69*01 G L E W M G G I I P . . I F G T A N Y A Q K F Q G R V T I T A D E S T S T A Y M E L S S L
39.18.E12 G L E W M G G I I P . . I F G A A N Y A Q K F Q G R V T I T A D E S T S T V Y M E V R S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV1-69*01 R S E D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
39.18.E12 R S E D T A V Y Y C A R R Q Q L Y K G Y . . . . . Y H H W G Q G T L V T V S S

FIG. 40B

Light Chain, Kappa

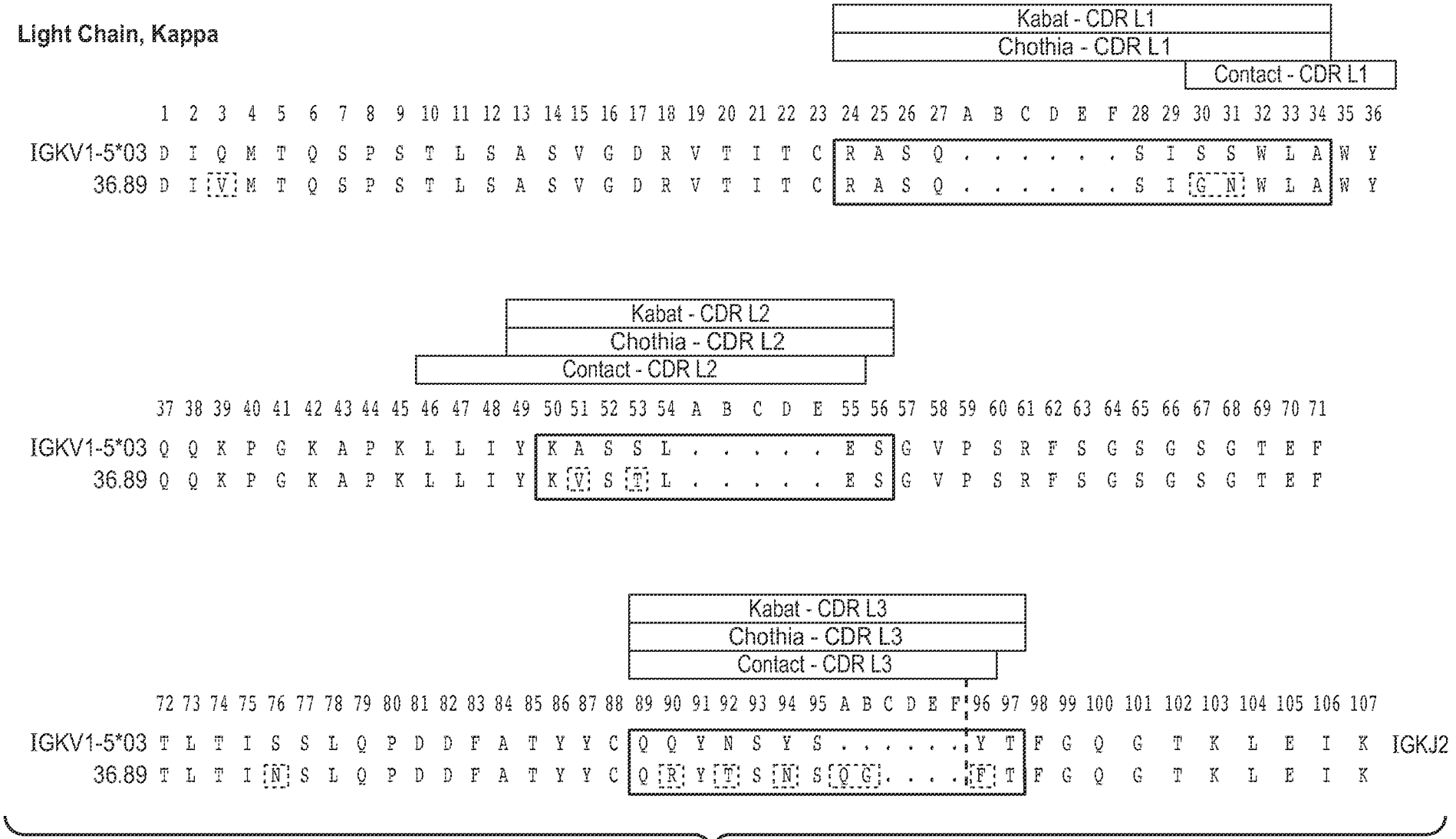


FIG. 41A

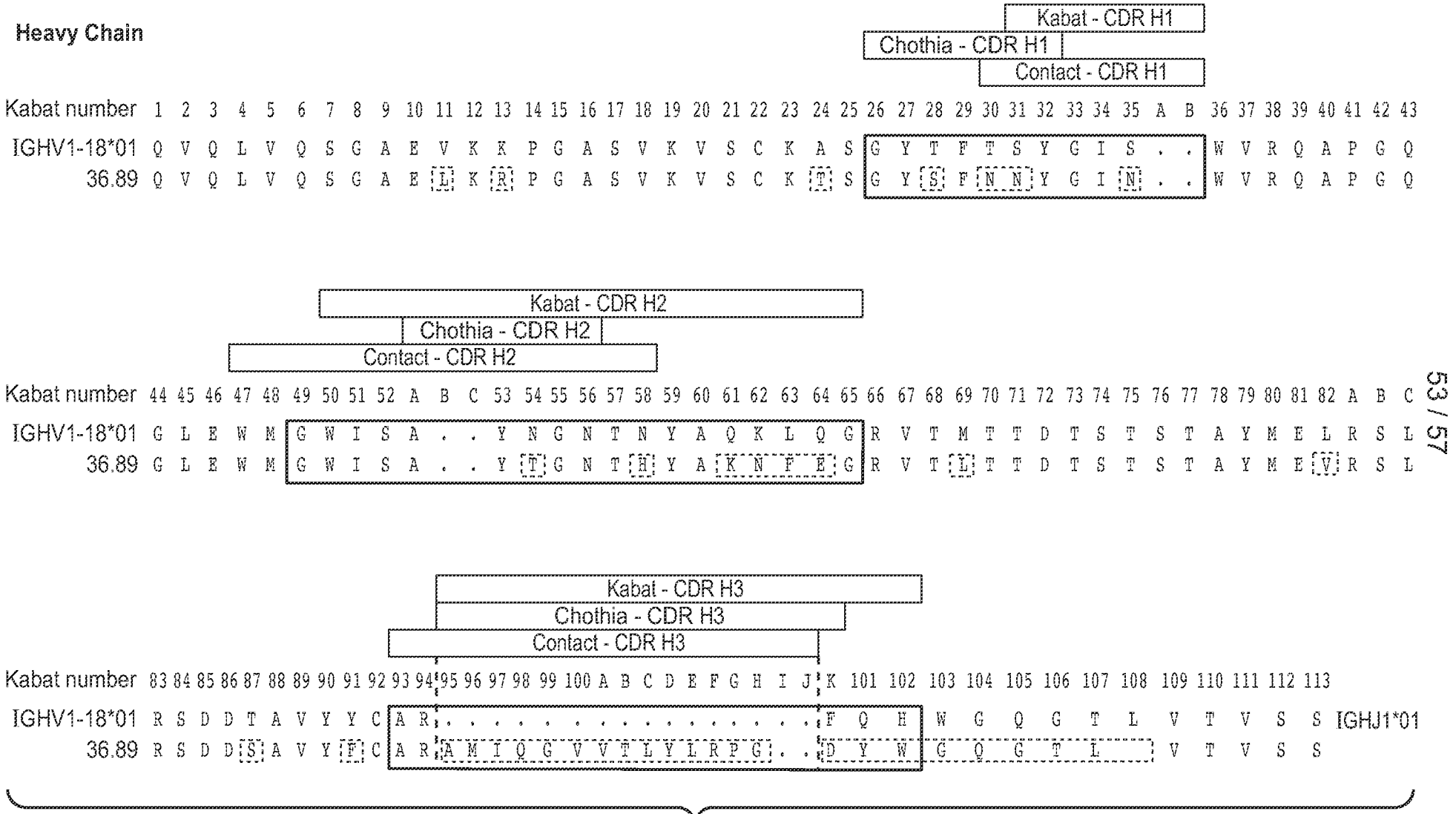

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV1-18*01 Q V Q L V Q S G A E V K K P G A S V K V S C K A S G Y T F T S Y G I S . . W V R Q A P G Q
36.89 Q V Q L V Q S G A E L K R P G A S V K V S C K T S G Y S F N N Y G I N . . W V R Q A P G Q
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV1-18*01 G L E W M G W I S A . . Y N G N T N Y A Q K L Q G R V T M T T D T S T S T A Y M E L R S L
36.89 G L E W M G W I S A . . Y T G N T H Y A K N F E G R V T L T T D T S T S T A Y M E V R S L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV1-18*01 R S D D T A V Y Y C A R . . . . . F Q H W G Q G T L V T V S S IGHJ1*01
36.89 R S D D S A V Y F C A R A M I Q G V V T L Y L R P G . . D Y W G Q G T L V T V S S

FIG. 41B

Light Chain, Lambda

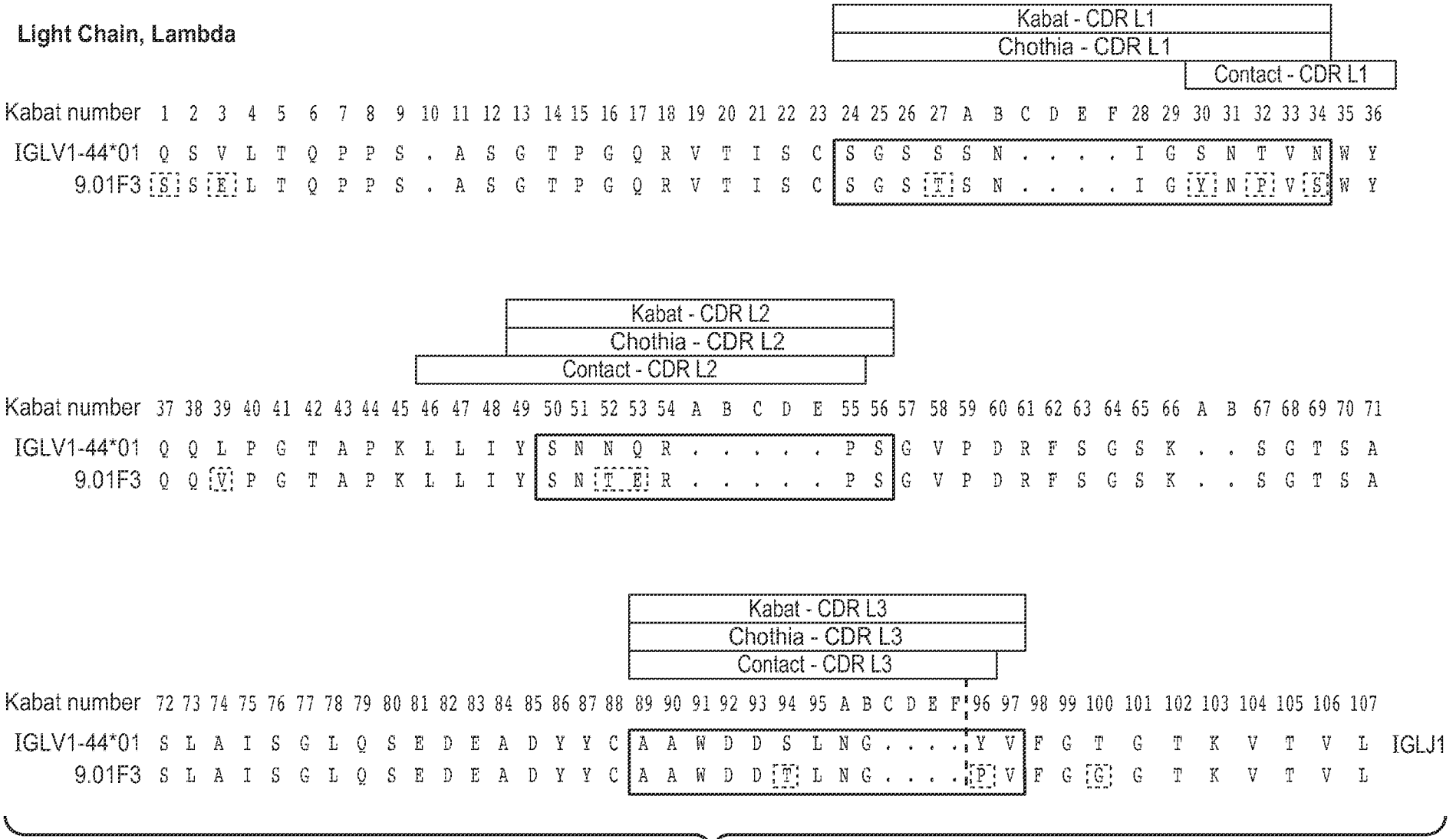


FIG. 42A

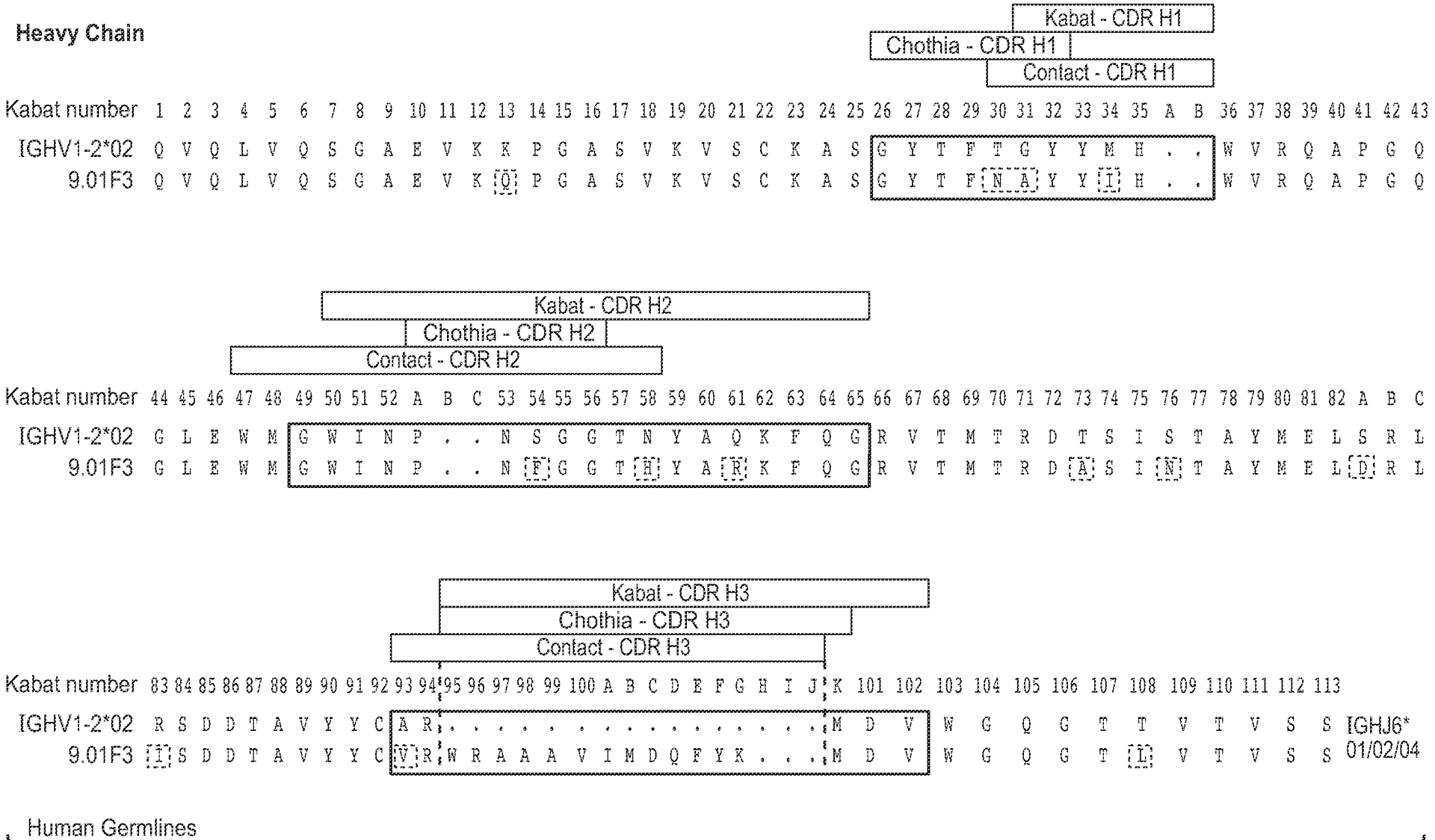

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV1-2*02 Q V Q L V Q S G A E V K K P G A S V K V S C K A S G Y T F T G Y Y M H . . W V R Q A P G Q
9.01F3 Q V Q L V Q S G A E V K Q P G A S V K V S C K A S G Y T F N A Y Y I H . . W V R Q A P G Q
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV1-2*02 G L E W M G W I N P . . N S G G T N Y A Q K F Q G R V T M T R D T S I S T A Y M E L S R L
9.01F3 G L E W M G W I N P . . N F G G T H Y A R K F Q G R V T M T R D A S I N T A Y M E L D R L
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV1-2*02 R S D D T A V Y Y C A R . . . . . M D V W G Q G T T V T V S S IGHJ6*
9.01F3 I S D D T A V Y Y C V R W R A A A V I M D Q F Y K . . . M D V W G Q G T L V T V S S 01/02/04
Human Germlines

FIG. 42B

Light Chain, Kappa

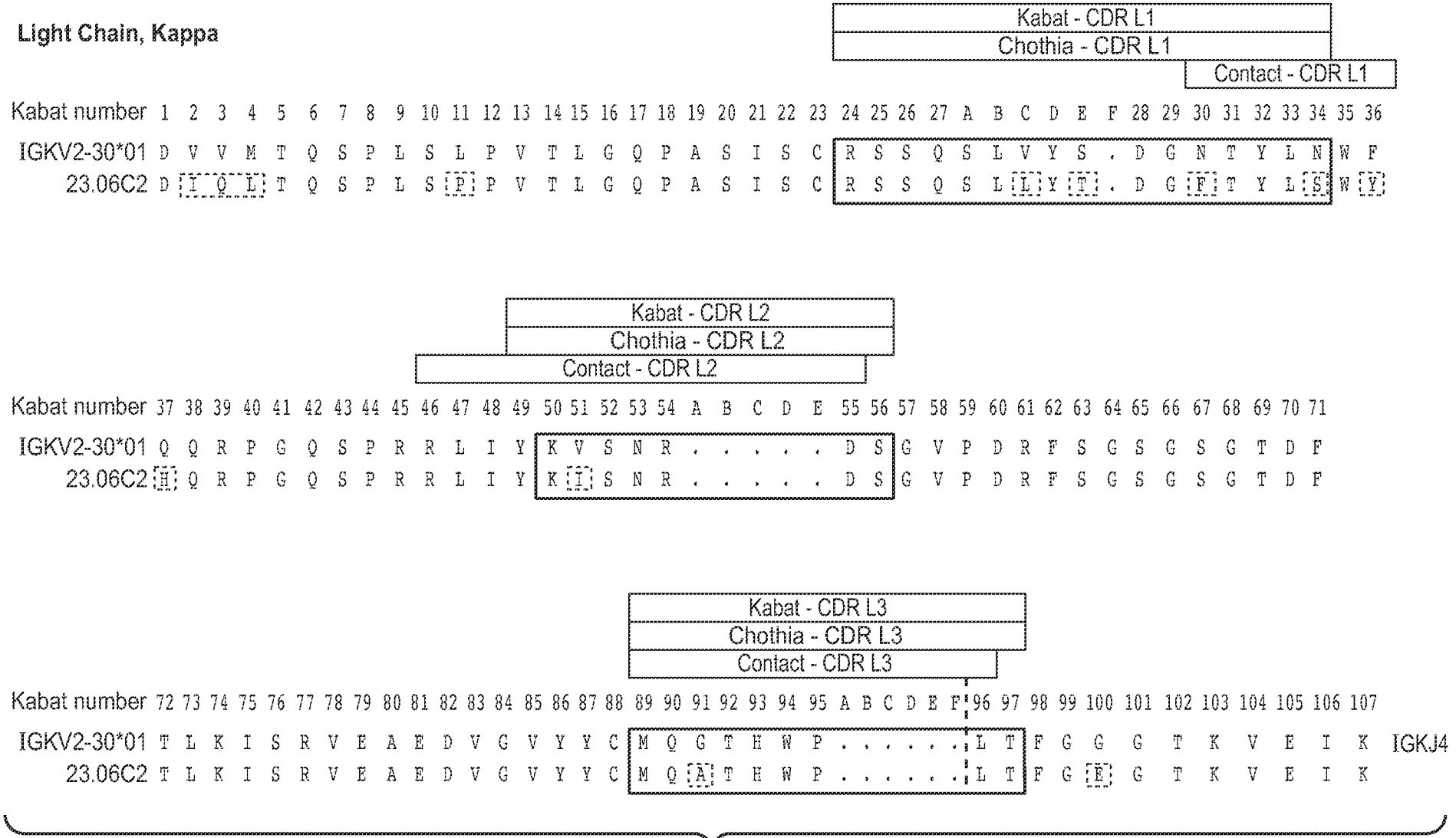


FIG. 43A

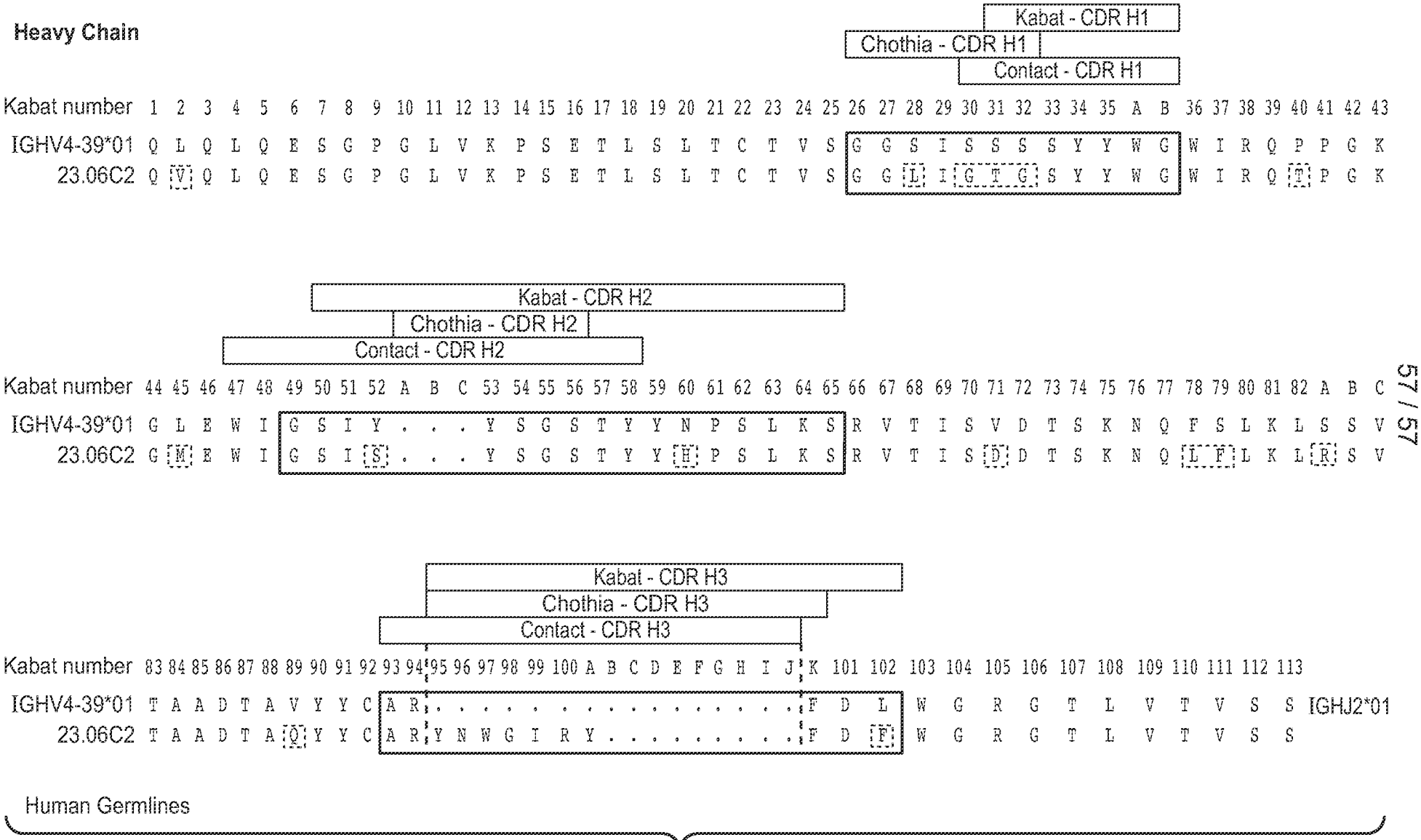

Heavy Chain
Kabat - CDR H1
Chothia - CDR H1
Contact - CDR H1
Kabat number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 A B 36 37 38 39 40 41 42 43
IGHV4-39*01 Q L Q L Q E S G P G L V K P S E T L S L T C T V S G G S I S S S S Y Y W G W I R Q P P G K
23.06C2 Q V Q L Q E S G P G L V K P S E T L S L T C T V S G G L I G T G S Y Y W G W I R Q T P G K
Kabat - CDR H2
Chothia - CDR H2
Contact - CDR H2
Kabat number 44 45 46 47 48 49 50 51 52 A B C 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 A B C
IGHV4-39*01 G L E W I G S I Y . . . Y S G S T Y Y N P S L K S R V T I S V D T S K N Q F S L K L S S V
23.06C2 G M E W I G S I S . . . Y S G S T Y Y H P S L K S R V T I S D D T S K N Q L F L K L R S V
Kabat - CDR H3
Chothia - CDR H3
Contact - CDR H3
Kabat number 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 A B C D E F G H I J K 101 102 103 104 105 106 107 108 109 110 111 112 113
IGHV4-39*01 T A A D T A V Y Y C A R . . . . . F D L W G R G T L V T V S S IGHJ2*01
23.06C2 T A A D T A Q Y Y C A R Y N W G I R Y . . . . . F D F W G R G T L V T V S S
Human Germlines

FIG. 43B