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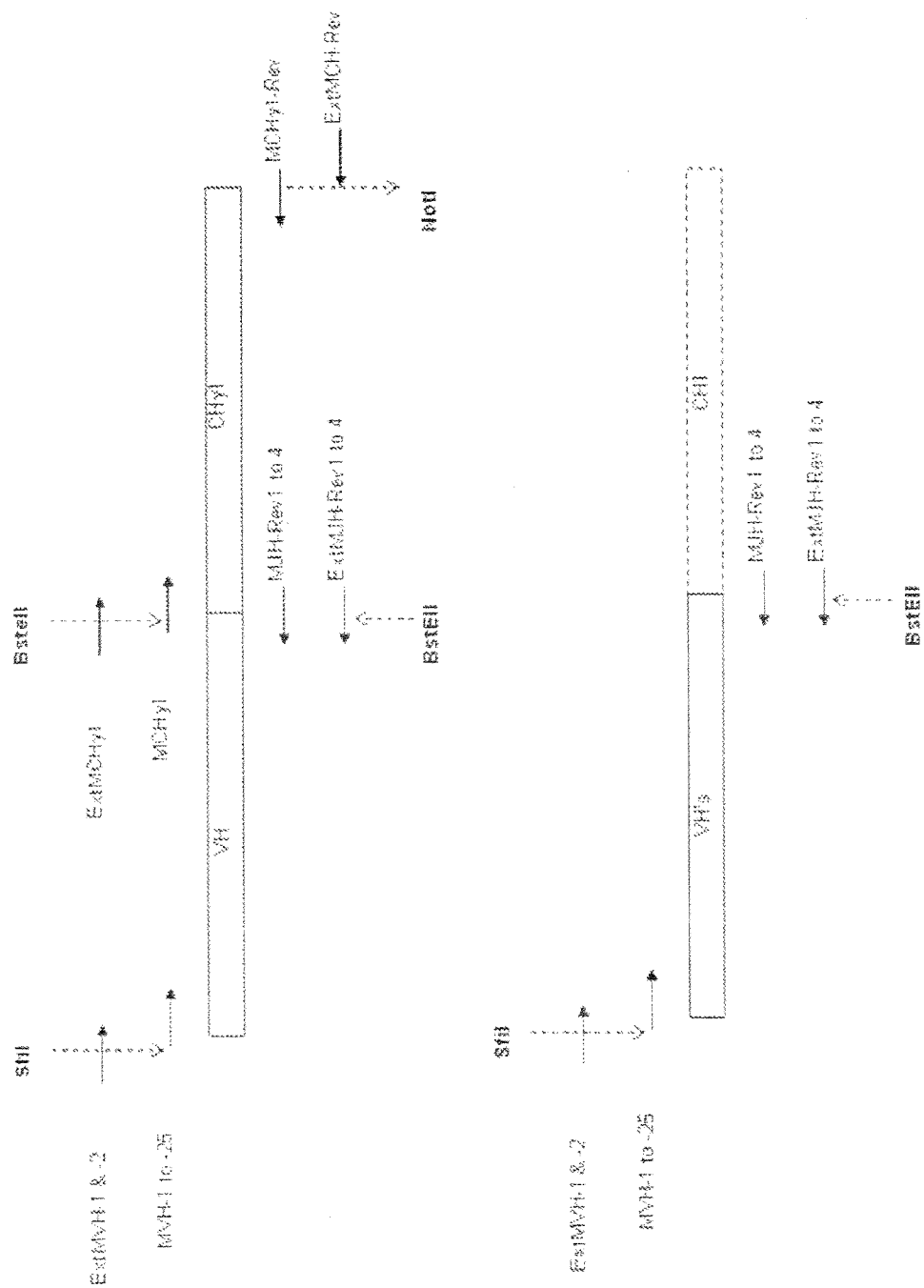


Figure 2

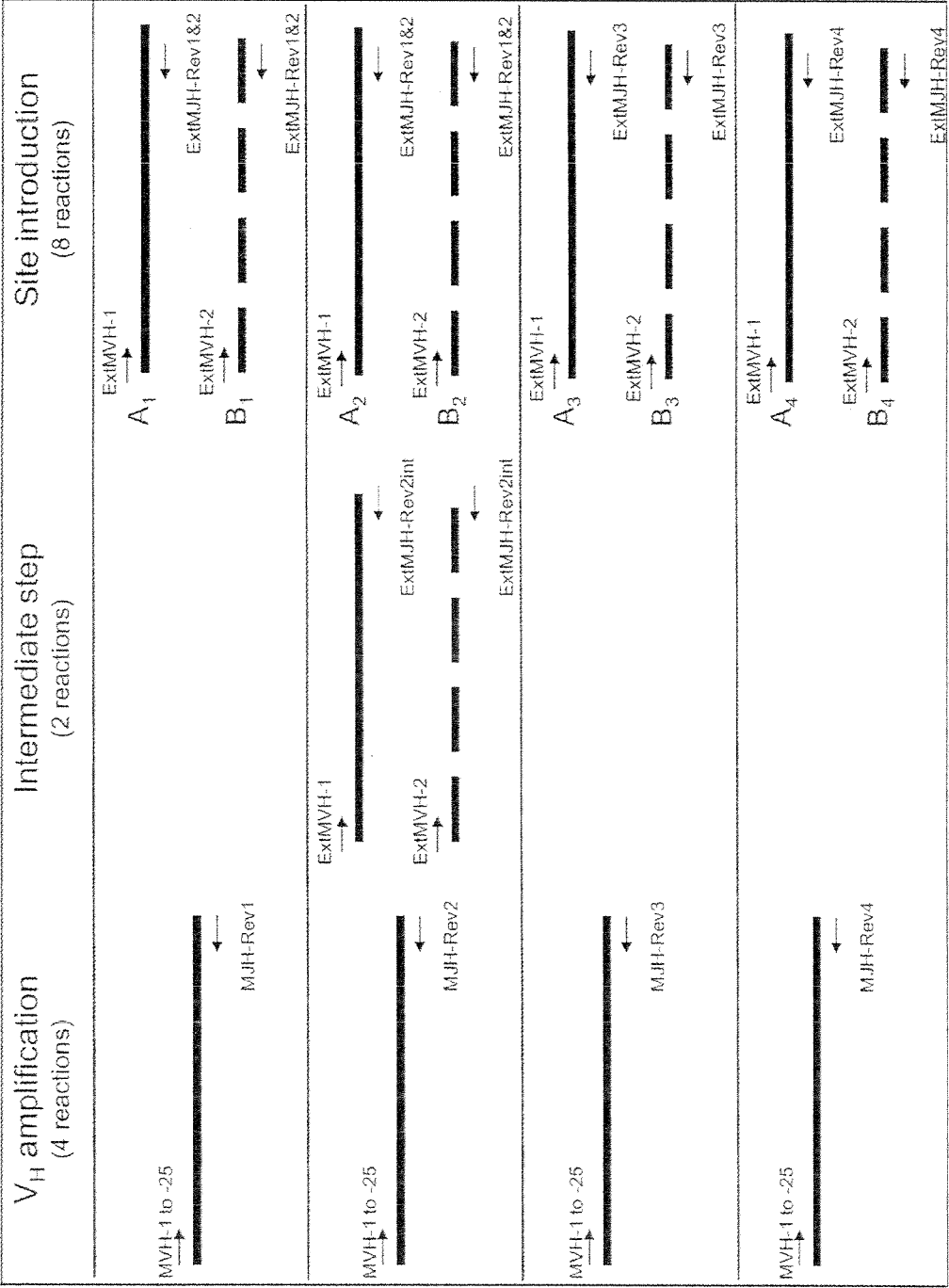


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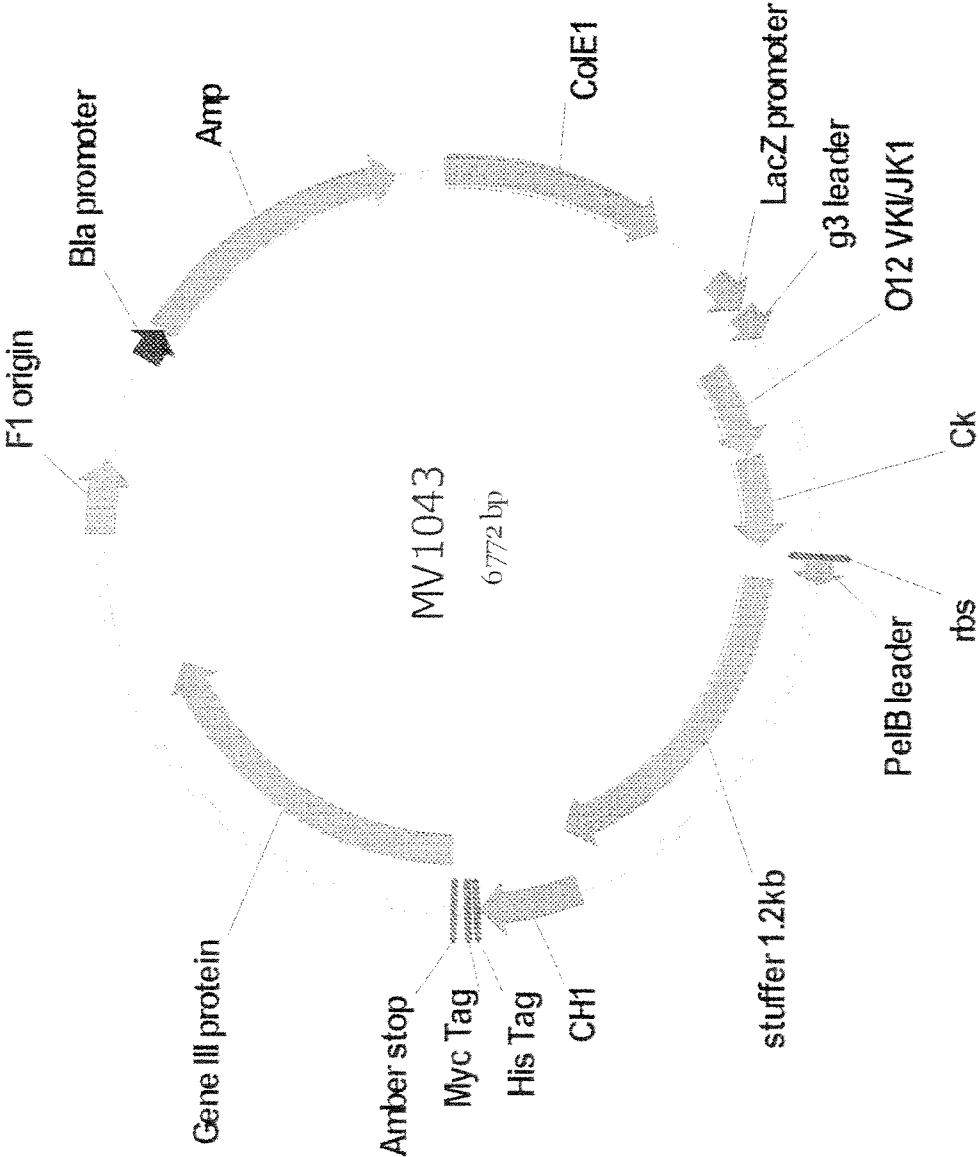


Figure 4

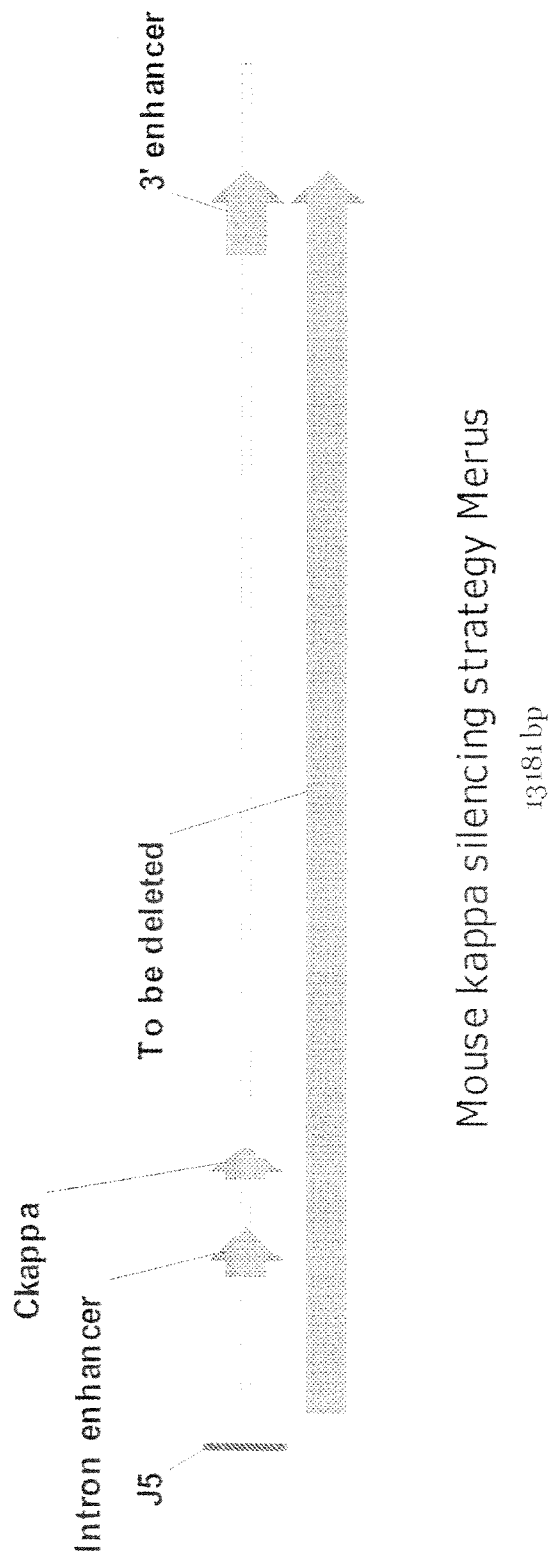


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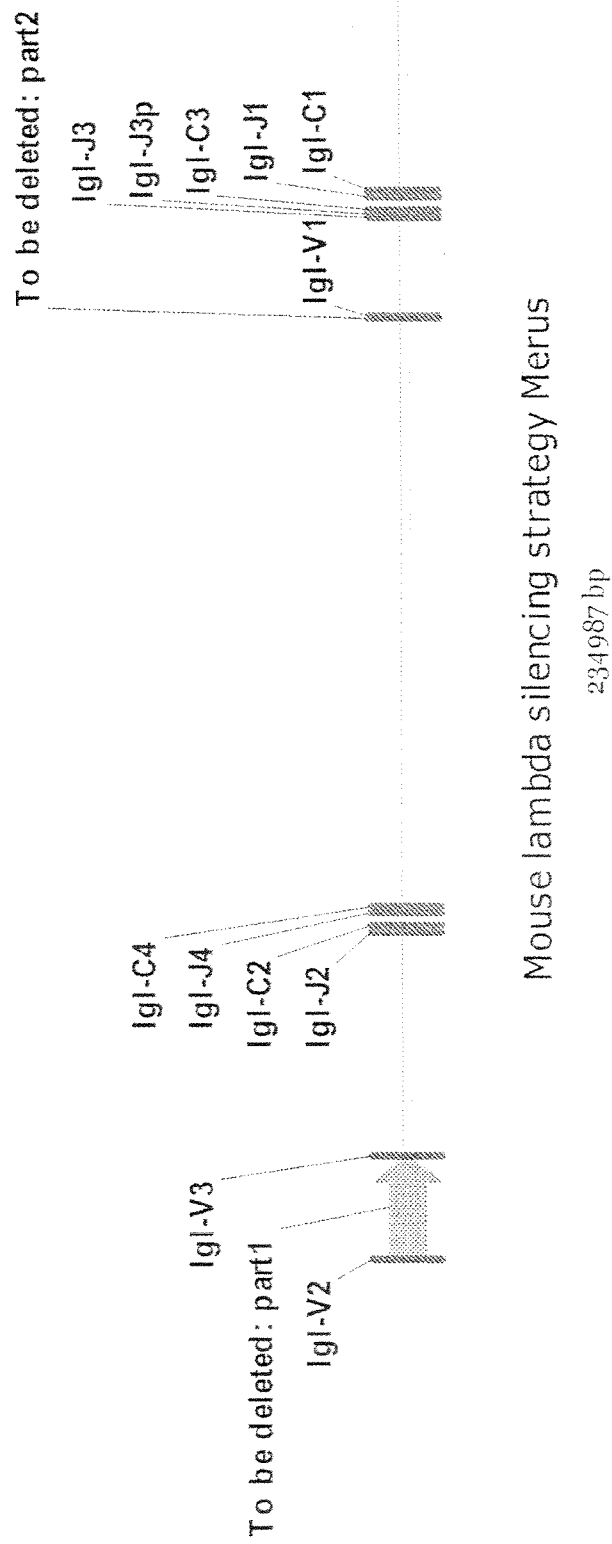


Figure 6

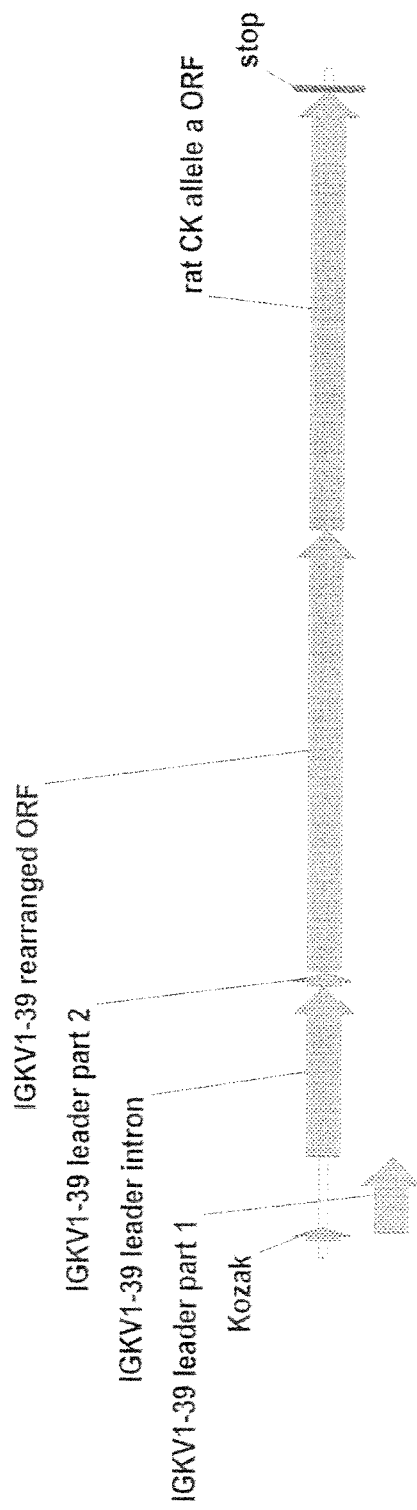


Figure 7

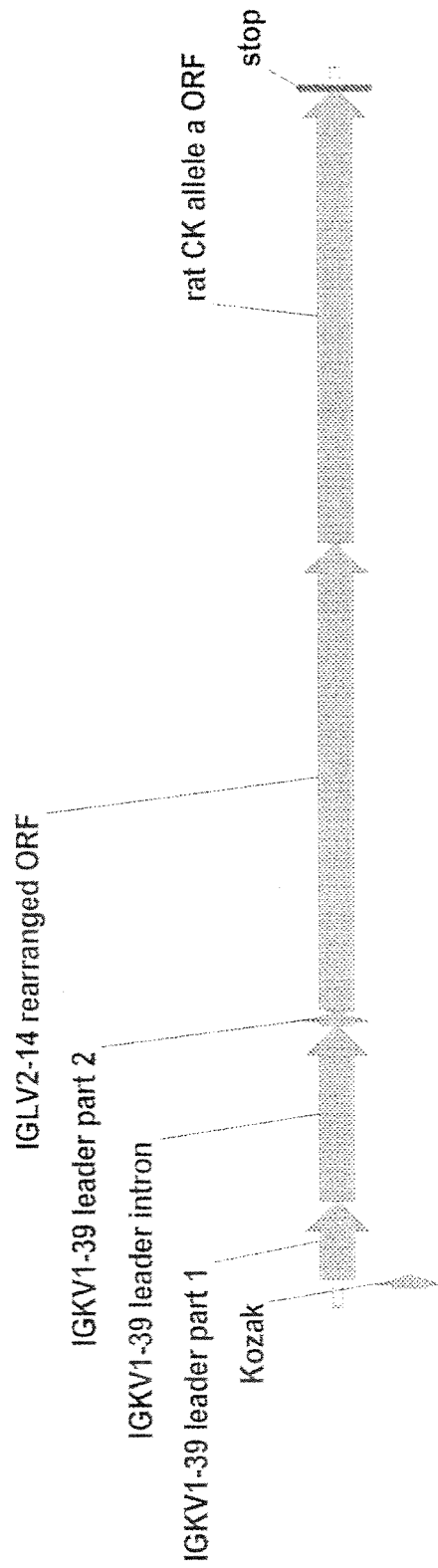


Figure 8

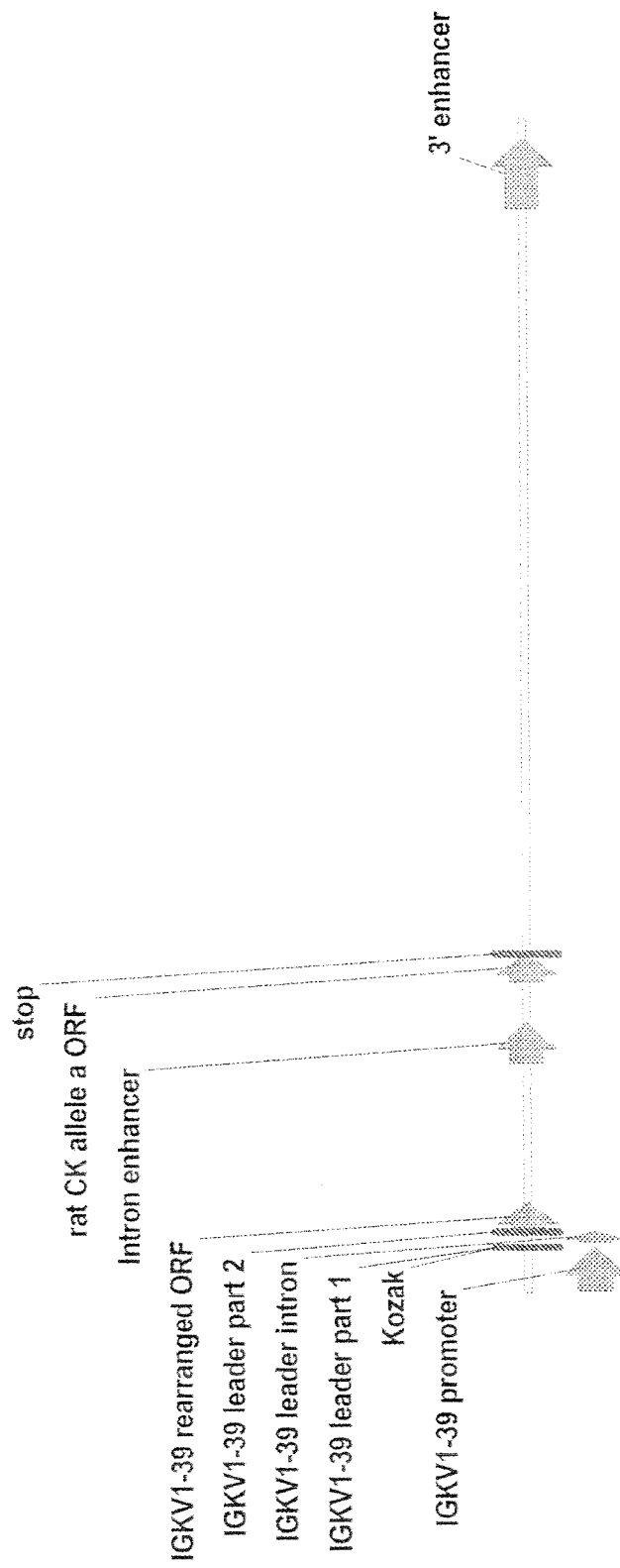


Figure 9

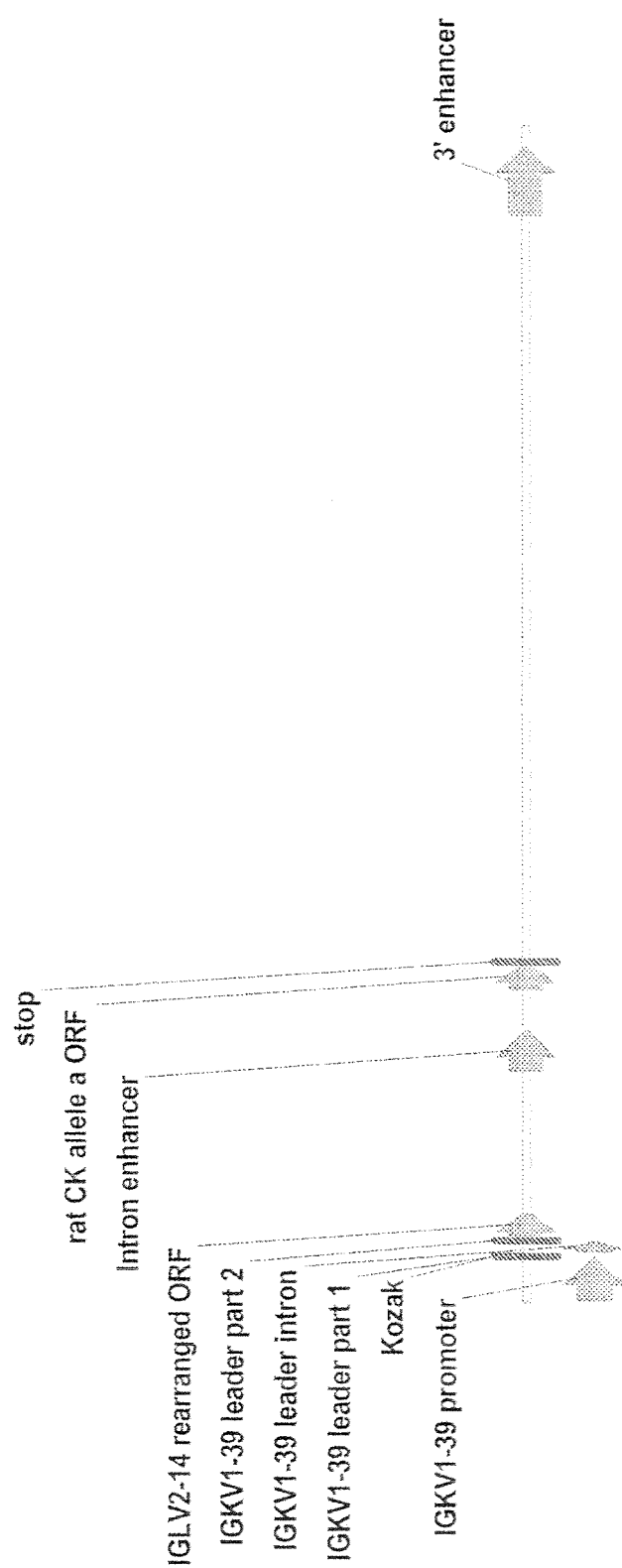


Figure 10

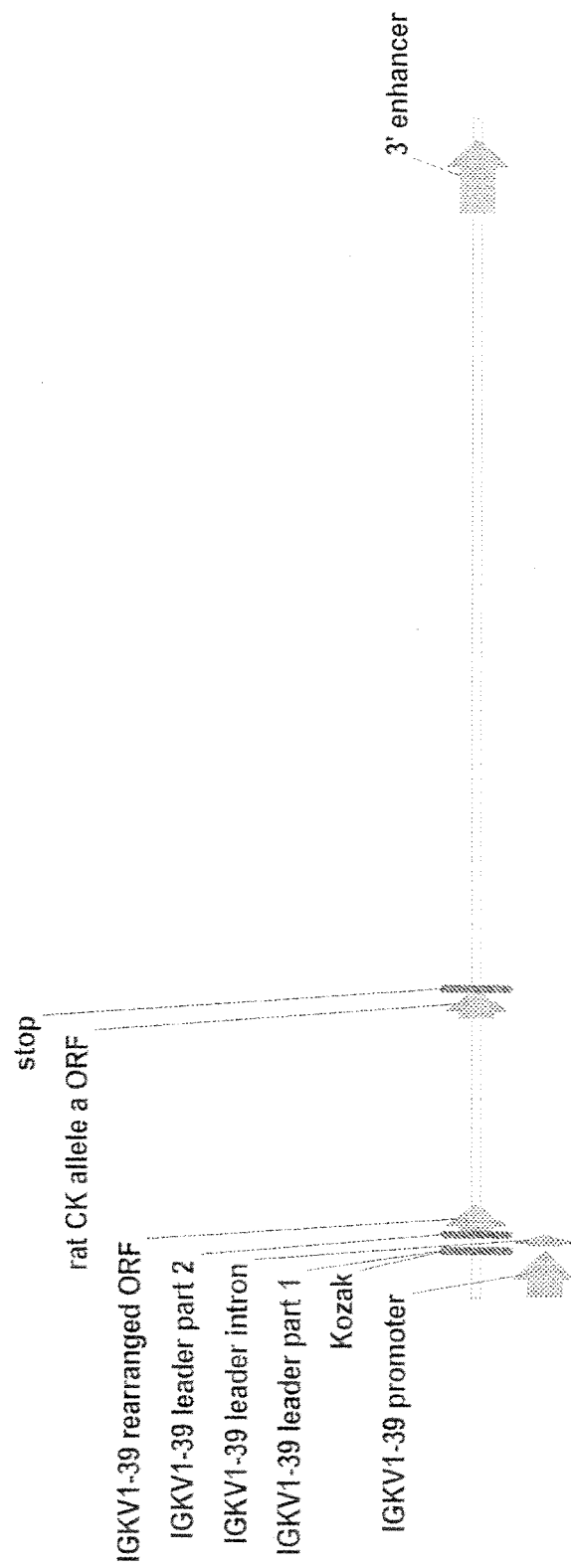


Figure 11

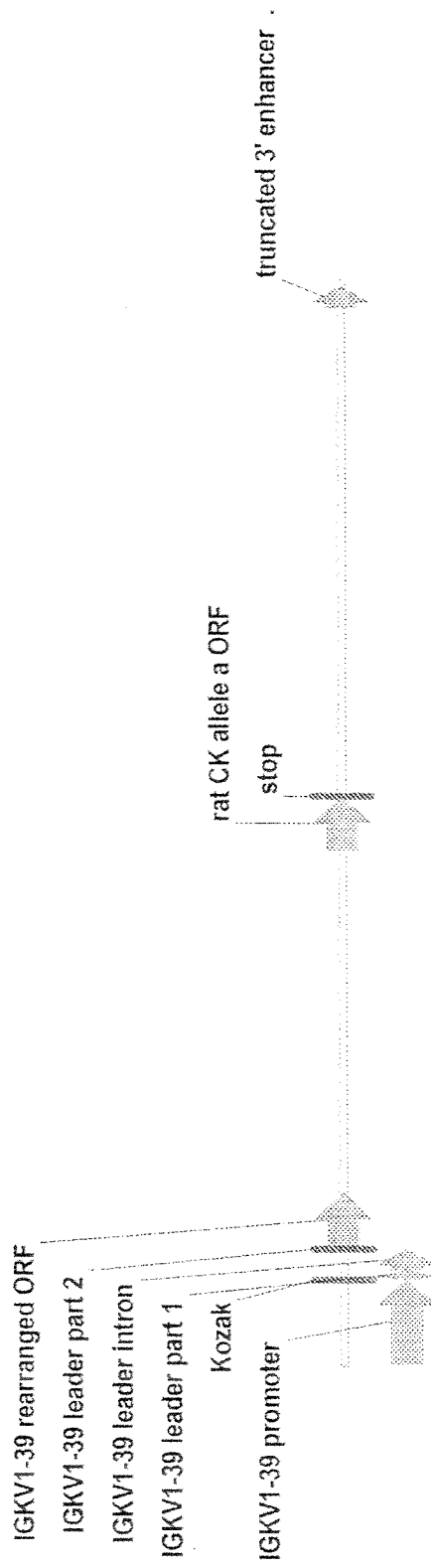


Figure 12

human germline IGKV1-39/J DNA	
1	GAC ATC CAG ATG ACC CAG AGC CCC AGC AGC CTG AGC GCC AGC GTG GGC GAC AGA GTG ACC ATC ACC TGC AGA GCC AGC
79	CAG AGC ATC AGC AGC TAC CTG AAC TGG TAT CAG CAG AAG CCC GGC AAG GCC CCC AAG CTG CTG ATC TAC GGC GGC AGC
157	TCC CTG CAG AGC GGC GTG CCC AGC AGA TTC AGC GGC AGC TCC GGC ACC GAC TTC ACC CTG ACC ATC AGC AGC CTG
235	CAG CCC GAG GAC TTC GCC ACC TAC TAC TGC CAG CAG AGC TAC AGC ACC CCC GGC ACC CTG GGC CAG GGC ACC AAG GTG
313	GAG ATC AAG
human germline IGLV1-39/J Protein	
1	DIQMTQSPSS LSASVGRVT ITCRASQIS SYLNWYQQRP GRAPKLLIYA
51	ASSLQSSVPS RFGSGSGTD FTLTISLQEP EDFATYVCCQ SYSTPPFPGQ
101	GTKVETR
human germline IGLV2-14/J DNA	
1	CAG TCT GGC CTG ACC CAG CCC GGC TCT GTG TCT GGC AGC CCT GGC CAG AGC ATC ACC ATC AGC TGC ACC GGC ACC AGC
79	AGC GAC GTG GGC GGC TAC AAC TAC GTG TCC TGG TAT CAG CAG CAC CCC GGC AAG GCC CCG AAG CTG ATG ATC TAC GAG
157	GTG TGC AAC AGA CCC AGC GGC GTG AGC AAC AGA TTC AGC GGC AGC AAG AGC GGC AAC ACC GGC CTG ACC ATC AGC
235	GGC CTC CAG GCT GAG GAC GAG GGC GAC TAC TAC TGC AGC AGC TAC ACC AGC AGC TCC ACC CTG GTG TTT GGC GGC GGA
313	ACA AAG CTG ACC GTG CTG
human germline IGLV2-14/J Protein	
1	QSALTQPAV SCSFGQSITI SCTGTSSDVG GYNVYVWYQQ HPGRAPKLLI
51	YEVSRNRFSGV SNRFGSKSG NTASLTISGL QARDEADYIC SSYTSSSTLV
101	FGSGTKLTVL
Rat IGCK allele a DNA	
1	AGA GGC GAC GCC GCT CCC ACC GTG TCC ATC TTC CCC CCC AGC ATG GAA CAG CTG ACC TCT GGC GGA GCC ACC GTG GTG
79	TGC TTC GTG AAC AAC TTC TAC CCC AGA GAC ATC AGC GTG AAG TGG AAG ATC GAC GGC AGC GAG AGG GAC GGC GTG
157	CTG GAC AGC GTG ACC GAC CAG GAC AGC AAG GAC TCC ACC TAC ACC ATG AGC AGC ACC CTG AGC CTG ACC AAG GTG GAG
235	TAC GAG AGG CAC AAC CTG TAC ACC TGC GAG GTG CAC AAG ACC AGC TCC AGC CCC GTG GTG AAG TCC TTC AAC CGG
313	AAC GAG TCT
Rat IGCK allele a protein	
1	RADAAPTYSI FRPSMRQLTS GGATVVCVFN NFYPRDIEVK WKIKGSEQRD
51	GVLDSTVDQD SKDSTYSMSS TLSLTKVEYE RHMLYTCEVH HTYSSSPVVK
101	SPNRNEC

Figure 12 contd

IGKV1-39/J-CK		1	GGT ACC GCG GCC GGC ACC ATG GAC ATG AGA GTG AGG GGC CTC CTG GGG CTC CTG CTA CTC TGG CTC CGA GGT AAG
79	GAT GGA GAA CAC TAG GAA TTT ACT CAG CCA GTG TGC TCA CTG ACT GGA ACT TCA GGG AAG TTC TCT GAT AAC ATG		
157	ATT AAT AGT AAG AAT ATT TGT TTT TAT GTT TCC AAT CTC AGG TGC CAG ATG TGA CAT CCA GAT SAC CCA GAG CCC CAG		
235	CAG CCT GAG GCG CAG CGT GGG CGA CAG AGT GAC CAT CAC CTG CAG CAG CCA GAG CAT CCA GAG CAG CCG GCT GGC CAG CAG		
313	GTA TCA GCA GAA GCG CCG CAA GGT GCT GAT CTA CGC GGC CAG CTC CCT GCA GAG CAG CCG GCT GGC CAG CAG		
391	ATT CAG CCG CAG CCG CTC CCG CAC CGA CTT CAC CCT GAC CAT CAG CAG CCT GCA GGC CTA GGA CTT CSC CAC CTA CTA		
469	CTG CCA GCA GAG CTA CAG CAC CCC CCG CAC CTT CCG CCA GAG CAC CAA GGT GGA GAT CAA GAG AGC CGA CCG CCG TCC		
547	CAC GGT GTC CAT CTT CCC CCG CAG CAJ GGA ACA GCT GAC CTC TGG CCG AGC CAC GGT GGT CTG CTT GGT GAA CAA CTT		
625	CTA CCC CAG AGA CAT CAG GGT GAA GTG GAA GAT CGA CCG CAG CGA GCA GAG CAG CCG GGT GGT GGA CAG CAG CAG		
703	CGA GGA CAG CAA GGA CTC CAC CAT GAG CAG CAC CCT GAG CCT GAC CAA GGT GGA GTA CGA GAG GCA CAA CCT		
781	GTA CAC CTG CGA GGT GGT GCA CAA GAC CAG CTC CAG CCC GGT GGT CAA GTC CTT CAA CCG GAA GGA GTG TTG AGC TAG		
859	CGA GCT C		
IGLV2-14/J-CK		1	GGT ACC GCG GCC GGC ACC ATG GAC ATG AGA GTG CCC GGC CAG CTC CTG GGG CTC CTG CTA CTC TGG CTC CGA GGT AAG
79	GAT GGA GAA CAC TAG GAA TTT ACT CAG CCA GTG TGC TCA GTA ACT GGA ACT TCA GGG AAG TTC TCT GAT AAC ATG		
157	ATT AAT AGT AAG AAT ATT TGT TTT TAT GTT TCC AAT CTC AGG TGC CAG ATG TGA CAT CCA GAT SAC CCA GAG CCC CAG		
235	TGT GTC TGG CAG CCG TGG CCA GAG CAT CAC CAT CAG CTG CAC CCG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG		
313	GTC CTG GTA TCA GCA GCA CCC CCG CAA GGC CCC CAA GCT GAT CTA CGA GGT GTC CAA CAG ACC CAG CCG CCG CAG		
391	CAA CAG ATT CAG CCG CAG CAA GAG CCG CAA CAC CCG CAG CTT GAC CAT CAG CCG CCT CCA GGC TGA GGA CCA GGC CCA		
469	CTA CTA CTG CAG CAG CTA CAC CAG CAG CTC CAC CCT GGT GTT TGG CCG CAG AAC AAA GCT GAT GGT GGT GGT GGT GGT		
547	CGC CGC TCC CAC GGT GTC CAT CTT CCC CCG CAG CAT GGA ACA GCT GAC CTC TGG CCG AGC CAC GGT GGT GGT GGT GGT		
625	GAA CAA CTT CTA CCC CAG AGA CAT CAG GGT GAA GTG GAA GAT CGA CCG CAG CAG GCA GAG CAG CCG GGT GGT GGA CAG		
703	GAT GAC CGA CCA GGA CAG CAA GGA CTC CAC CTA CAG CAT GAG CAG CAC CCT GAG CCT GAC CAA GGT GGA GTA CGA GAG		
781	GCA CAA CCT GTA CAC CTG CGA GGT GGT GCA CAA GAC CAG CTC CAG CCC GGT GGT CAA GTC CTT CAA CCG GAA CCA GTG		
859	TTG AGC TAG CGA GCT C		
VKP-IGKV1-39/J-CK		1	GGC CAG CCC ACA TGA AAC AAT GGG AAC CAT GTG ACA ATC ACA GAG GTG TTG TTA CTA TAG CAA AAG GGA TTG TTA CTC
79	TCC ACA TCC CTT TAA GTA ACT TGA AGG CTT GAT AGA CCC ACC CTC TAA GAC TTC ATT AGA CAT TCC CTA CGA ATG GTT		
157	ATA CTC TCC TGT ATA CTA CAA CTC TAA AAT ATB TTA TTC CAT ATA GTC CTT AGG TTT GTA TTA AAG TTT GAC		
235	TTT TTT CTT TCA AAA TAT CTC TTG TCA CAA CAG CCG CTC TAG AGA GAA ATA CAT TCC CTC CAG GCA AAT CTA TGC TGC		
313	GCT GGT CTG ACC TGG GAC CCI GGG GAC ATT GGC CCI GTG CTG AGT TAC TAA GAT GAG CCA GGC CAG CTG CAG TGC TCA		
391	GCC TGC CCC ATG CCC TGC TGA TTG ATT TGC ATG TTG CAG AGC ACA GGC CCC TGC CCT GAA GAC TTT TTT ATG GGC TGG		
469	TGC CAC CCT GTG CAG GAG TCA GTC AGG TAA GGA TGG AGA CCA CTA GGA ATT TAC TCA GGC CAT GAG AGT GGC CCA GCT CCG GGT GGT		
547	GCT ACT CTG GGT CCG AGG TAA GGA TGG AGA ACA CTA GGA ATT TAC TCA GGC CAT GAG AGT GGT CCG CCA GCT CCG GGT GGT		
625	AGG GAA GTT CTC TGA TAA CAT GAT TAA TAG TAA GAA TAT TTG TTT TTA TGT TTC CAA TCT CAG GTG CCA GAT GTG ACA		
703	TCC AGA TGA CCC AGA GGC CCA GCA GGC TGA GCG TGG GCG ACA GAG TGA CCA CCA CCA GAG CCA GAG CCA GAG CCA		
781	GCA TCA GCA GCT ACC TGA ACT GGT ATC AGC AGA GGC CCG GCA AGG CCC CCA TGC TCA TCT AGC CCG CCA GCT CCC		
859	TGC AGA GCG GCG TGC CCA GCA GAT TCA GCG GCA GCG GCT CCG GCA CCG ACT TCA CCA TCA CCA GCA GCG TGC AGC		
937	CGS AGG ACT TCG CCA CCT ACT ACT GCG AGC AGT ACA GCA CCG CCC CCA CCT TCG GCC AGG GCA CCA AGG TGG AGA		
1015	TCA AAC GTA AGT ACA CTT TTT TCA TCT TTT ATG TGT AAG ACA CAG GGT TTC ATG TTA GGA GTT AAG GTC AGT TCA		
1093	GAA AAT CTT GNG AAA ATG AAG AGG GCT CAT TAT CAG TTG AGC TGS CMT ACA GTG TCA GAT TTT CTG TTT ATC AAG CTA		

Figure 12 contd

1171 GTG AGA TTA GGG GCA AAA AGA GGC TTT AGT TGA GAG GAA AGT AAT TAA TAC TAT TAT GGT CAC CAT CCA AGA GAT TGG ATC
 1249 GGA GAA TAA GCA TGA GTA GTT ATT GAG ATC TGG TGG TCT TCT AGA CGT TTA AGT GGG AGA
 1327 TTT GGA GGG GAT GAG GAA TGA AGG AAC TTC AGG ATA GAA AAG GGC TGA AGT CAA GTT CAG CTC CTA AAA ATG TGG
 1405 GAG CAA ACT TTG AAG ATA AAC TGA AGG ATG AAA CAG CGC AGA TGA AAG AGC GGC CTG GAG CTC TGA GAA
 1483 GAG AAG GAG ACT CAT CGG TGT TGA GTT TCC ACA AGT ACT GTC TTG AGT TTT GCA ATA AAA GTG GSA TAG CAG AGT TGA
 1561 GTG AGC CGT AGG CTG AGT TCT CTC TTT GGT TCC ACA AGT ACT GTC TTG AGT TTT GAT GAC TAG TAT GTC CTG CTA AAA TAA
 1639 TCA TTA AGC TGT TTG AAA GTT TGA CTA GAT TTA CCA TGG CTT GCT GAA TAA TCA GAA GAG GTG TGA CTC
 1717 TTA TTC TTA AAT TTG TCA CAA AAT GTC AAA ATG AGA GAC TCT GTA SGA AGG AGT CCT TGA CAG ACA GCT CAA GGG GTT
 1795 TTT TTC CTT TGT CTC ATT TCT ACA TGA AAG TAA ATT TGA AAT GAT CTT TTT TAT TAT AAG AGT AGA AAT ACA GTT GGG
 1873 TTT GAA CTA TAT GTT TTA ATG GGC ACG GTT TTG TAA GAC ATT TGG TCC TTT GTT TTC CCA GTT ATT ACT CGA TTG TAA
 1951 TTT TAT ATC GGC AGC AAT GGA CTG AAA CGG TCC GCA ACC TCT TCT TTA CAA CTG GGT GAC CTC GCG GCT GTG CCA GGC
 2029 ATT TGG CGT TCA CCG TCC TAA GGG CCA TGT GAA CCC CCG GGG TAG CAT CCC TTG CTC CGC GTG GAC CAC TTT CCT
 2107 GAG GCA CAG TGA TAG GAA CAG AGC CAC TAA TCT GAA GAG AAC AGA GAT GTG ACA GAC TAC ACT AAT GTG AGA AAA ACA
 2185 AGG AAA GGG TGA CTT ATT GCA GAT TTC AGA AAT AAA ATG CAT TTA TTA TTA TAT TCC CTT ATT TTA ATT TTC TAT TAG
 2263 GGA ATT AGA AAG GGC ATA AAC TGC TTT ATC CAG TGT TAT ATT AAA AGC TTA ATG TAT AYA AYC TTT TAG AGG TAA AAT
 2341 CTA CAG CCA GCA AAA GTC ATG GTA AAT ATT CTT TGA CTG AAC TCT CAC TAA ACT CCT CTA AAT TAT ATG TCA TAT TAA
 2419 CTG GTT AAA TTA ATA TAA ATT TGT GAC AAG ACC TTA ACT GGT TAG GTA GGA TAT TTT TCT TCA TGC AAA AAT ATG ACT
 2497 AAT AAT AAT TTA GCA CAA AAA TAT TTC CCA ATA CTT TAA TTC TGT GAT AGA AAA ATG TTT AAC TCA GCT ACT ATA ATC
 2575 CCA TAA TTT TGA AAA CTA TTT ATT AGC TTT TGT GTT TGA CCC TTC CCT AGC CAA AGG CAA CTA TTT AAG GAC CCT TTA
 2653 AAA CTC TTG AAA CTA CTT TAG AGT CAT TAA GTT ATT TAA CCA CTT TTA AAT TGA TGT CAA TTC CCT TTT
 2731 AAC TAT TAA TTT ATT TTA AGG GGG GAA AGG CTG CTC ATA AAT CTA TTG TTT TTC TTG GTA AAG AAC TCT CAG TTT TCG
 2809 TTT TTA CTA CCT CTG TCA CCC AAG AGT TGG CAT CTC AAC AGA GGG GAC TTT CCG AGA GGC CAT CTG GCA GTT GCT TAA
 2887 GAT CAG BAG TGA AGT CTG CCA GTT CCT CCC AGG CAG GTG GGC CAG ATT ACA GTT GAC CTG TTC TGG TGT GGC TAA AAA
 2955 TTG TCC CAT GTG GTT ACA AAC CAT TAG AAT AGG GTC TGA TGA ATT CTT CAG AAT ATT TCT SGA CAG CCA AAT AAT ACA GAC
 3033 COT GGC TTA AGS CCG TGT CLA TAC AGT ASG TTT AGC TTG GCT ACA CCA BAG GAA GGC ATR CAG ASG CTA ATA TCA GAG
 3121 TAT TCT TGG AAG AGA CAG GAG AAA AGT TTC TGT TGC TCT TAC CTT ATG TGC TTG TGA AAG AAC TCT CAG TTT TCG
 3199 TCA GGA GTG TCA AAT AAA CTG GTC TGA ATT TCT GTG TGA AGC ATG GAA CTG AAA AGA ATG TAG TTT CAG GGA AAG
 3277 GCA ATA GAA GSA AGC CTG AGA ATA TCT TCA AAG GGT CAG ACT CAA TTT ACT TTC TAA AGA AGT AGC TAG GAA CTA GGG
 3355 AAT AAC TTA GAA ACA CCA AGA TTG TAT ATA TGT GCA TCC TGG CCC CAT TGT TCC TTA TCT GTA GGG ATA AGC GTG CTT
 3433 TTT TGT GTG TCT GTA TAT AAC ATA ACT GTT TAC ACA TAA TAC ACT GAA ATG GAG CCC TTT CTT GTT ACT TCA TAC CAT
 3511 CCT CTG TGC TTT CTT CAG GGG CCG ACG CTC CCA CCG TGT CLA TCT TCC CCA GCA TGG AAC AGC TGA CCT
 3589 CTG GCG GAG CCA CCG TGG TCT GCT TCG TGA ACA ACT TCT ACC CCA GAG ACA TGA GCG TGA AGT GSA AGA TCG ACG GCA
 3667 TGG TCA AGT CCT TCA ACC GSA ACG AGT GTT GBA GAC AAA GGT CCT GAG ACG CCA CCA GCT CCC CAG CAT CCT
 3745 TGA GGC TGA CCA AGG TGG AGT ACG AGA GGC ACA ACC TGT ACT CCG AGG TGG TGC ACA AGA CCA GCT CCC CAG CAT CCT
 3823 ATC TTC CTT TCT AAG GTC TTG GAG GCT TCC CCA CAA GCG ACC TAC CAC TGT TGC GGT GCT CCA AAC CTC CTC CCC ACC
 3901 TCC TTC TCC TCC TCC CTT TCC TTG CTT ATC ATG CTA ATT TTA GCA GAA AAT ATT CAA TAA AGT GAG TCT TTG
 4057 CAC TTG AGA TCT CTG TCT TTA CTA AAT GGT AGT AAT CAG TTG TTT TTC CAG TTA CTT GGG TTT CTC TTC TAA AGA
 4135 AGT TAA ATG TTT AGT TGC CCT GAA ATC CAG CAC AAT TAA AGG ATA AAT AAA ACT CTC CAG TTG CCG TTG TGT GCT GTC
 4213 CAC TAC ATG GCA GTC CTT TCT AAG GTT CAC GAG TAC TAT TCA TGG CTT ATT TCT CAG CAT GGT AGG TTT GAG GAG
 4291 GCA TAC TTC CTA GTT TTC TTC CCC TAA GTG GTC AAA GTC CTG AAG GGC GAC AGT CTT TAT AAG CAC ATG TTC TGT AAT
 4369 CTG AAT CAA CCT ACC CAG TAA ACT TTG GSA AGC AAA GTA TCA TTA TCA CAG GAA GCA AAG CCA ACC TAA ATG TGC
 4447 AAG CAA TAG GAA AAT GTG GAA GCC CAT CAT AGT ACT TGG ACT TCA TCT TTT GTG CCT TCA CTA AGT TTT TAA ACA
 4525 TGA CTT GGC TCC TAT CTG CCA TTG GCA AGT GTG GGC CAT ACC CAC CTA CTT CAA GGT CTA TAC CGT GAG ATT
 4603 ACA CAC ATA CAT CAA AAT TTG GGA AAA GTT CTA CCA AGC TGA GAG CTG ATC ACC CCA CTC TTA GCT TAT CTC TGT
 4681 ACA CCA GAA ACC TTA AGA AGC AAC CAG TAT TGA AAG TAT TGA TAC AAC CAA AAT AAT GTC
 4759 CAC CAA CAG TTA AAT TAT GAC ATG TTC ACA ACT GAG CTA TTA CTT AAT BAG GAG AAT TAA AAT AAA ACT TAA GAG
 4837 CAT AGT TTA ATC TCA TAA ACA AGA TAA TAA TCA TCC ATG TAA GTT TAA AAG CAG GTA AAA

Figure 12 contd

4915 TTT AAA ATT AAG AGA GAC ATA AGT TTT GAG GTA GCA AGA TGG AAA CTC TGG GGC TTG GGG AAT GTT CTG TCT CTC TGT
 4993 ATG GGA TGT GAA AGT TAC TAT TGT GGA ATT GGT CTT CTT CCG GTA TAT ATT ATA TAC TTT ATA ATA ACT TCA
 5071 CCF AAA GAA ATA TCT BAT ACC CAG TGC ATA CAT AAA AGA GBA TAC AAG GAR TGA ATC ATA CGT CAA GGC CAG AAA GAC
 5149 AAT AAA GTA GGG GAT CCA GGA TCA AAT CTC CCA CCA TGT TAC TCC TTC ATG CAT GBA ATT AGA AAT AGC CAT GTA TAA
 5227 AAA ACA CAT AAT TCA AAC ACA TGA TCC CTT GGG GTC TCT TCC TTC ATG CAT GBA ATT AGA AAT AGC CAT GTA TAA
 5305 AAT GAG ATA GAA GAG ACC TTC AAT AAC AGG TCA AAG AAT ATA GGT AAT TTT GTC TGG GTA TGA AGA GGC CCG TAC GTA TAA
 5383 AAG GTT ACA TTA GGG AAG GAG GAC AAT AAC AGT GAC TTT CAT TCT CCC CTT CTT GGA GGC CCG TAC GTA TAA
 5461 TCC CTC GTG GGC TCA TCC ACT CAG CAC ACA TTT ACT AAG CAT CTT CTC AGC CTA CAC TCT GAA GGC AGT GCA GAA TAA
 5539 TGT TAG TGT CCC TTC CCG CAG TTA ATA TGC AGT AGG AGA GGG CAA CCC TTT CCG CTT CTT CAG AAT GHA CAT TAT TAT CCA CTT
 5617 GGS AAA GGA CAG TCA CCA AAT AAG AGA GGG CAA CCC TTT CCG CTT CTT CAG AAT GHA CAT TAT TAT CCA CTT
 5695 TTT GAA ACT TCT TTT AAT TGC TTT TTT TTA ATT TGT TTT AAA TAG CAT AAC CTT CAT CCA TTT CTG GGA ACC
 5773 AAA TTT ATC AAT CAA CAG TGC CTC TAA TCT GGC TAT TAA TAC AAA AAT GGC TCC TCA AAA TAT ATA TGT TCG AGT CTT
 5851 ATC TAA AAC AGA ACC CAC AAT ABA AAA GAA AGA ATA CAT ATA AGC ATT TAT AIA ATT CTG AGC AAC CTT GTG CTT
 5929 TGT GAA AAA AAT ATA ATC TAA TGT CAC AAT CTG TAT TCT TTT TAT TTA ACA CTG GIG AAA TTA TAC CAT TBA AGA GAA
 6007 AGA GGA CAG ATC ACT GAT CTT AGG ATC TAG GGA TGT TAC ABA TAA GAA AAC AAA TGT GAC AAA GAG CTG TCA CAA GGA
 6085 GGA TCT TCA AGG TCA CAG AAT CAC TGT TCT GAT TTT AGT GGT TAC ATA CAT TTA AAT ATG TGA TAA AAT GTT GTT
 6163 GAA CTA TAT TCA TAT ATT GTA CCA ATG TCA AAT GCT TAA TTT TGG CTC TAT AGT ATA ATT ATG CAC TAA AUA ACT ATT
 6241 TGG ACA AAG AAA ATG ATG TTT ACA TCA AAG GTG AGG CCA TAT TTT TTA GGA ACA TAA CTT AAA AAC CAT TTT TTT GGA TAA
 6319 CTA ATG AAA AEC CAT TTT GTG TGC CTT GGC ATA TCA TGC CTA AGC TGT CAC CAG ATA GAT CTA ATA AGA CCT AAG CCT
 6397 CAG AAG CAA GCC CTT GCC CAG CAA GCA GSC ASC ACA GAT AAG AGC TBA ACC CAG GAC AGG CCA TGA TAT GCT AAT GBA
 6475 CTA CTT TCA AGG TGG TGT TGC TGA CTT AGT GAA CCA GCC CCA AGC TGT GAG CCC CAA TAG CAC AAA GCT ACT GGC CAA
 6553 AGA AAT TAT ACA AAA ATT GGA ACT TTG GGA ATG TGC AGG ATC GCT CTG CTG TAT TGG AAC ACA GCT TCT CTT
 6631 TGT TTT GTA TGA TGA ATG CCA GTC TGA AAG CTT CCA AAA CTT TCT CAC TGA AGA ATC CCC ATG TGG GAC CCC TAC AGA
 6709 CTC TTT TGC CCA AAC AAC TGC TCT CTT GGT GTG ATA TCT GGT TTT GTG CTT TTA TGT TAG CAT AAT AAT ATA AGG AAT
 6787 GTT TGT GTG AAT AAA CCA AAC ATA TTT TAA AAG CAA ATA TTG TAT GCA CAT CTT AAT TGC TAA AAA GTT TAC ABA TAA
 6865 TAG TCC CAT CTT CTC CAC AAT ACT GGA TCC AAA GTC CTA AIT TCA ATG TTG GGC AIT TTT ACA GAG AGA AAG ACA
 6943 TTA AAA ATG AAG AGA CAT GCA GAG AGT GCA CCA TGC CAT CGT GGA GAC AGA CTG AGA CAC AAG TGA TGT TAG TCA AAG
 7021 AGG ATT AAG GAC TTC CAG AAG CCA CCA AAG GAA GGA GGT ATG AAG TGG TTT CTC CCT CAG AGT ATC CAG AGG AGA CTA
 7099 AAC CAA CCA ACA CTT TTT TGC TTA AGA CTT CTT GCC TTC AGG ACT GTG AGA AGG TAG CTT CCT AIT GTT CTA AGC CCC
 7177 AGT ATG TGG CAT TTT GTT AAG GTA GAG TCA AGA AAC CAA TAA AAT GCA GAC AGA CAA AAG GAT AGC TGA GTT TTC CAG
 7255 GCC CTT CTT TCT TAT TTT TGG TTT TGT TGG TTT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT
 7333 TGG GGA GTT TTT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT
 7411 TTT TGT TTT TGT TTT TTT GTT TTT GTT TTT GTT TTT GTT TTT GTT TTT GTT TTT GTT TTT GTT TTT GTT TTT GTT TTT
 7489 TAA TGT CTA CAT CTC AGA GGG GAT CCT CTA AAT TCA AAT AAG CAG TAG CTC TCC AIT TTT AGC TCT TAT TTA TTC ATT
 7567 TAT TTA CTT ACT TAC TTA TTG TCT GTA GAT GAA AGA AAT TTG GAG TGG GAA AGG GTT CAT GAG CCC CCA GCA ACT AAT
 7645 GAG GAG CTA CAG ACA AAT GAT GTT TCT GGS GAA AAG AGA CCA ACT TTC TTT GAG AAT ATA GCT TCT GAT GGG TCA ACC
 7723 ATG TTC CTG TGG CTG ATG TCA CAC CCA GGA GTA TGC AGA CAA CAG AAA CTG GAG TTA ATG AGT TGT TTT AAA AAT AAA
 7801 AAA GGG CAT GAA GCT TGG GAT AGA AAT TAA GGA TAA ATA CAA TTA AAT ACA GGA AAT TCT GAA AGA AAT AAT AAA AAC
 7879 AAT TCT TTT TTT AAA AAA TCC AGA AAT TCC TCA TAA TTG CTT CTG GAG AAC TTT ACA AAG ACT TCA AAA GTS GAG GAT
 7957 AGT TAT ATT GTA GAA AAG GTA GAG AGG AGA ATA GTG GAA GAT AAG GAG ACT TCA AAA GSA GTS GAG GAT
 8035 AAG GGA GAA AGC AGA AGC AAT GGC TGA TAG ACA CAG AAT AAG AGG GAA CAG AAG GAA GGA AGC CAG GAT
 8113 GGG TAT TTC TTT GCC TAT CTG TGA CTT GGC AAT TAT TGA GTT CAA GGC TTA AAT CTT CAC TTT
 8191 TGC CAA CTC AAC AGA GTC TTT CTT TAT AAC CAG GCC CCC AGT ATG CTC ATG TCA GGT CTT CTT AIC TCC
 8269 TTA TAG CAA TCC TGT TTA TAA CTG GGT AAT TTT GTG AAG GGA AGG AAG TGC ACA TAG TGT ACA ACT TTT TAA
 8347 TAC AAA ATT TTG AAG AGT TTG TAC AAT GTA TGT ATA AAT AAT TAA TAT TAT GCA CTT TAG ATT TTG ATT TCA ACT
 8425 CAA GAT ACT AAT TCT ATA TAT ATG GGT TAA AAT ATA ATA AGT TTA TCA CAT GCT TAT TTT TAT TGT GGT
 8503 TTT GGA GAC AGG GTT TCT CTG TAT AGC CTT GGC TGT GAA ACC CAC TTT GTA GAC CAG GCT GGC CTC AAA CTC AGA
 8581 AAC CTA CTT GCC TCT TCT GCC TCT TCT GCC TCT TCT GCC TCT TCT GCC TCT TCT GCC TCT TCT GCC TCT TCT GCC

Figure 12 contd

8652 TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC
 8757 TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC TCT GCC
 8815 AAC TTT ATA TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT
 8893 AGT AAT CGC AAG TTG TAT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT
 8971 TTG CTT TGC TTT GCT TTT GCT TTT GCT TTT GCT TTT GCT TTT GCT TTT GCT TTT GCT TTT GCT TTT GCT TTT GCT TTT
 9049 GGG GAG GGA GGG TGG AGA AAG AAT CTT ACT AIG AAG CTC TGA CTG TCC TGG GAA CTC AAT ATA TAG AIC AGG CTT GAT
 9127 TCA ACT CAT AGA GAT CTG CTT TCT TCT GCC TCC CAA GTG CTG GGA ATA AAG CCA TAC ACC TCC ATG CCG AGA TAG TGA
 9205 TCC CAA GTT TTA GCA AAA GTT TCT AGA CTT GAC ATT AAT CGA TGG AGA TAG ACA TGA ATT ACA CAA AGA ACT AAT GUG
 9383 GAG TTT ACC TGA ATC ATA CTC TAT ACT TTA TCA GAG ATT AAA TTA ACA TTT AAT CCA GTG CCA GGC TAG AGS CAC
 9361 CAT TCA AIG GCA GUG TTT GCG ATC AIG CAT AGG CTT AGT CTT CAG TGC TGA AAG GCA TTG GGG GCA ATA TTA CFC ATT
 9439 ATA CAG ATG AGA AAC TGG GAA AGA CTT GCC TCA GAT TCT CTA CUG AAA GGC TGA GTT TGT GGC TTC TAG AAA ATC TTT
 9517 TAC TTT CAA TAT TTT TTA TGT ATA ATT TTT TTA TTT CCA CTG AIT TTA TTT TTT AAT TTT AAC AAT TAT AAG AAA TAA
 9595 ATG CAA TAA ACC ABA TAC AIG GAC AAA AAA ATA CAA GAA TCA TAT GAT CAC CTC AAT GGA AGG AAA AAA ABA GAA AGA
 9673 AAA AGT CTT TGA TAA GAT TCA ACA TTC AAT TTT TTA TTA GAT AIT TTC TTC AAT TAC AAT TCA AAT GGT ATC CCC
 9751 AAA GCC CCC TAT ACC TTC CCC TGC CCT GCT CCC CAA CCC ACC CAC TCC TGC TTT CTG GGC CTA TCT TTT GCT ACA TAT
 9829 GAG GCA TAT GAT CTT CAA AAA ACC AAG GGC CTC TCC TCT CAT TGG TGG CCG ACT AIT AGG CCA TCT TTT GCT ACA TAT
 9907 GCA ACT AGA GAC ACA GCT CTG GGG GTT ACT GGT TAG TTC ATA TTG TTA GTC CTC CTA TAG AGT TGC AGA CCC CTT TAG
 9985 CTC CTT GGA TAC TTT CTC TAG TTC CTT CAP TAG GGG CCC TGT GTC CCA TCC AAT AGA TGA CTG TGA GCA TCC ACT TCT
 10053 GTA TTT GCC AGG CAC TGG CAT ABO CTC ACG AGA AAG AGA GAG CTA TGT CAG GAT CCT GTC AGT AAT AAT AAT TCT CTG GCA
 10141 TAT GCA ATA GTA TCT GGG TTT GGT GGT TGT ATA TGG GAT GGA TCC CCA AGT GGA GCA GTC TCT GAA TGG TCC TTC CTT
 10219 CCA TCT CAG CTC CAA ACT TTG TCT TCT TGA GTT TCA TAT GTT GCA TCT TGG AIA TTC TGT GGG TTA ATA TCC ACG
 10297 CCA CAC TTT GGT CTT CTT CTT TCT TCT TGA GTT TCA TAT GTT GCA TCT TGG AIA TTC TGT GGG TTA ATA TCC ACG
 10375 TAT CAG TGA GUG CAT ATC ATG CGT GTT ATT TTG TGA TTA GTT TAC CTC ACT CAG GAT GAT AIC CTC CAG AIG CAT CCA
 10453 TTT GGC TAA GAA TTT CAT TAA TTC ACT GTT TTT AAT TGC TGA ATA GTA CTC CAT TGT GTA AAT GTA CCA CAT TTT CTT CTG
 10531 TAT CCA TTC CTC TGT TGA GGG GCA TCT GGG TTC TTT CCA GCT TCT GGT TAT TAT AAA TAA GGC TGC TAT GAG CAT AGC
 10609 GGA GCA TGT GTC CTT ATC AAG TTG AAG CAT CTT CTA GGT ATA TGC CCA GGA GAG GAA TTG CTG GAT CTT CUG GTA GTA
 10687 CCA TCA ACA TGC ATT CTT AAT AAA AGC CCT AGA ACA AGG AGG ACT GTA GGA AAC ATA TTC CAA CAT AAT AAA GGT TAT
 10765 GTA TGA CAA ACT CAT GAC CAA TAT CAT CCT AAA TGA ATG AAA CCA TTA ATA AGC TCC ATT AAA AIC AGA GGA CTG CCC
 10843 ACT ATC CCT ACT TCT CAT CCA TAA TGA GAT TGA AGC AAT AGC TGG AGC AAT AAG GCA AGA GAA GGG ATA ATG GGA
 10921 AAA TAT TAA GTC AAA TTG TTT TCA ATT GAA GAT TAT ATT ATC TTA TAC CCA ATG ACC TCA AAT TTT GAC TAG AAA AAT
 10999 TGT AGA AAT TAT CAA TAA TTT CAG CAA AGT GTT AIG ATG CAC CAC AIC CTT AIT CTT CTC CCC AGC TTC TGC TTS CTT
 11077 CTC TCT TCT TGC TCT TCA TCC TTT CTG TCC TTC CAT CTG CQT GCA CTC TGA GAC TGA GTG CAG CQT GTA ACT
 11155 CTC CTG TGA CTG AGT ATC TCA AAA AAC GTT CTA CCT GCC AAA CCT GGA TGA GCC CTT TGT TCT TCT GAA GCT AIG AGS
 11233 CTC TCT ACA TAG ACT CAA GAA GGA AAT GAC AGG GAG GGT ATA ATG AAG TGG GGA AGG CTG ACA TTA GCA TTG CTC
 11311 CTG TGT GSC TCC TTA ATT TCT CAT ACT TCA CAC TGA GAT GTT AAT AAC TGT GAC TCA TAG GTG AAG AAG CCA GAG CTA
 11389 AAG TTC TUA TAT TTG AGT GTT ATA GAA TGA GTA GAG CAG TAG TTC TCA AAC TAT GGT TCA TGA CTC CTT TAT GGG TCA
 11467 AAC TAC CTT TTC ACA CAG GTT GCA TAT CAG ATA TCC TAA TTT TAT ATA CAT ATG CAT ATG TAT ATA TAT ATA
 11545 TTT CAC AAC AGT AGG AAA ATT ATT TAG TAA TCA TTT TAT AGT TGT GGG TCA TGG CAA CAT GAG GAA CTG TAT TAA AGS
 11623 GTT GCA GCA TTA GGA ATG TTG AGA CCC ACT GTA ACT GAT AAG GGT TAA GGC AGC AAT AAG CCA CCC AAT GGA CCA
 11701 TGT GCC TTT TCC AAC ATT TGC CAC ATG GTA AGC TCT GTA TAG ACT TTT TAA AGA ACA TTG GTT TGT AAT TTT AAA TGG
 11779 ATA ABB GTC TTC ACT GTC TAT CAC CCA TCT ATA TAA TAA ATA CAT AAG TTT TGA TTC CAC CAT GGA TTC AAA TGC AAA
 11857 AAT CCT CAA CCT AAG ACA TAG CAG TGA AAC ATT GAT GAC CAA ATA GGA AAT CCA TGT AGA GAC CTT CTA TGT TCT TAT
 11935 GGC TCC ACA GAC ACC ATC TTG CAA CAG AGT TCT ACT TTG CTA CCA GTA ATG AAT ACA GTG TCT CAA CTC CUG CCA TTG
 12013 AAT CTT CAG GAA GCC COT GAA ATG ACT TGT ACT ACA CCA CTT CTT AAA GAC AAT AAG ACT TAG AGG GAA TAA
 12091 ATG TCA TGC CTG AGA TCA TGC AAC CAA TTA AGT CCA ACT TGG CCT GAT CAA GAG GCA CAA TTC AAA AGC AAT GTT GTT
 12159 CCT TCA CTA GCT CTT GTG TAT GGT TGC TGA TTC GGG AAG ACA AGT AAT CCC TAG TGG GAA AGC ACT TGG
 12247 AAA TCA AAT GTC TCA TTT AAC AGA TTA GAA GAT GAA ACG GTA GAC TCT GTG TAG TGG ACC CTT GTG AIC CCA TCG
 12325 CTA GGA AGA CTG AGG CAG GAA GTC CTC GAG CTA CCA CCA GCT TAG GCT ACA CAG AGA AAC TAT CTA AAA AAT AAT TAC

Figure 12 contd

[illegible]

Vkp-IGKV1-39/J-Ck-Δ1

1	GCG	CGG	CCC	ACA	TGA	AAC	AAT	GGS	AAC	CAT	GTG	ACA	ATC	ACA	GAG	GTG	TTG	TTA	CTA	TAG	CAA	AAG	GGA	TTG	TTA	CTC
79	TCC	ACA	TCC	CTT	TAA	GTA	ACT	TGA	AGC	CCT	GAT	AGA	CCC	ACC	CTC	TAA	GAC	ATC	ATT	AGA	TCC	TAT	CCA	ATG	GTT	
157	ATA	CTC	TCC	TTT	ATA	CTC	ATA	CCA	ATG	TAA	ATA	ATA	ATA	TAT	TAT	CAT	ATA	ATA	CTT	AGG	TTT	TAT	TTA	ATG	TAT	
235	TTT	TTT	CTT	TCT	TAA	ATA	CTC	TTG	TCA	CAA	CAG	CGG	ATA	CTA	ATA	GAA	ATA	CAI	TCC	CTC	CAG	GCA	AAT	CTA	TAT	
313	GCT	GGT	CTG	ACC	TGG	GAC	CTT	GCG	GAC	ATT	GCC	CTT	GTG	CTG	AGT	TAC	TAA	GAT	GAG	CCA	GCC	CTG	CAG	TTG	TGC	
391	GCC	TGC	CTC	ATC	CCC	TGG	TGA	TTG	ATT	TGC	ATG	ATC	CAG	ACC	ACA	GCC	CCC	TGC	CTT	GAA	GAC	TTT	TTT	ATG	GSC	
469	TGC	CAC	CCT	GTG	CAG	GAG	TCA	GTC	TCA	GTG	AGC	AGC	CAC	CAT	GGA	CAI	GGA	AGT	GCC	CGC	GCA	GCT	CTT	GGG	CCT	
547	GCT	ATT	CTG	GCT	CGG	AGG	TAA	GGA	TGG	AGA	ACA	CTA	GGA	ATT	TAC	TOA	GCC	AGT	GTG	CTC	AGT	ACT	GAC	TGG	AAC	
625	AGG	GAA	GTT	CTC	TGA	TAA	CAT	TAA	TAG	TAA	GAA	TAT	TAT	TTG	TTT	TTA	TGT	TTC	CAA	TCT	CAG	GTG	CCA	GAT	GTG	
703	TCC	ACA	TGA	CCC	AGA	GCC	CCA	GCA	GTC	GCA	GCG	CTA	GCG	TGG	GCG	ACA	GAG	TGA	CCA	TCA	TCT	GCA	GAG	CCA	GCC	
781	GCA	TGA	GCA	GCT	ACC	TGA	ACT	GGT	ATC	AGC	AGA	AGC	CGC	GCA	AGE	CCC	ACA	AGC	TGC	TGA	TCT	ACG	CCG	CCA	GCT	
859	TGC	AGA	GCG	GCG	TGC	CTA	GCA	GAT	TCA	GCG	GCA	GCG	GCT	CGC	GCA	CCG	ACT	TCA	CCC	TGA	CCA	TCA	GCA	GCC	TGC	
937	CCG	AGC	GTA	AGT	CCA	CTT	ACT	ACT	GCC	AGA	GCG	AGC	ACT	ACA	GCA	CCC	CCC	CCA	CTT	TGG	GCC	AGG	GCA	CCA	AGG	
1015	TCA	AAC	GTA	AGT	ACA	CTT	TTT	TTT	TTT	ATG	TAT	AAG	ACA	CAG	GTT	TTT	ATC	ATA	GGA	GTT	AAA	GTT	ATC	AAG	CTA	
1093	GAA	AAT	CTT	GAG	AAA	ATG	GAG	AGG	GCT	CAT	TAT	CAG	TTG	ACG	TGG	CAT	ACA	GTG	TCA	GAT	TTT	CTG	TTT	ATC	AAG	
1171	GTG	AGA	TTA	GCG	GCA	AAA	AGA	GCG	TTT	AGT	TGA	GAG	GAA	AGT	ATA	TAA	TAC	TAT	GCT	CAC	CAT	CCA	AGA	GAT	TGG	
1249	GGA	GAA	TAA	GCA	TGA	GTA	GTT	ATT	GAG	ATT	TGG	GTC	CTA	CTG	CAG	GTA	GCG	TGG	TCT	TCT	AGA	CGT	TTA	AGT	GGG	
1327	TTT	GGA	GCG	GAT	GAG	GAA	TGA	AGC	AAC	ATC	AGG	ATA	GAA	AAG	GAG	TGA	AGT	CAA	GTT	CAG	CTC	CTA	TAA	TGG	ATG	
1405	GAG	CAA	ACT	TTG	AAG	ATA	ATC	CCG	TGT	GTA	ATG	ACC	CAG	AGG	ATG	AAA	CAG	CGC	ATG	PCA	AMG	AGG	CTG	GAG	CTC	
1483	GAG	AAG	GAG	ACT	CTG	ATT	CTC	GTT	TTT	TGC	CTC	CTA	AGT	TTT	TAT	GAC	TAC	AAA	AAT	CAG	TAG	TAT	CTG	CTG	AAA	
1561	GTG	AGC	CGT	AGC	CTG	AGT	ACT	CTC	CTT	CTC	CTT	CTC	ATA	AGT	CTC	CTC	CTA	TGG	CTT	GCT	GAA	TAA	TCA	GAG	GTG	
1639	CTA	TTA	AGC	TGT	TTG	AAA	GTA	TGA	CTG	CTT	GCC	ATG	TAG	ATA	CCA	TGG	CTT	GCT	GAA	TAA	TCA	GAA	GAG	GTG	CTC	
1717	TTA	TTT	TAA	AAT	TTG	TCA	CAA	ATC	GTG	AAA	ATG	AGA	GAC	TCT	GTA	GGA	ACG	AGT	CTT	TGA	ACG	ACA	GCT	CAA	GGG	
1795	TTT	TTT	CTT	TGT	CTC	ATT	TCT	ACT	ACA	TGA	AMG	TAA	ATT	TGA	AMT	GAT	CTT	TAT	TAT	TAT						

2497	ANT	BAI	BAI	TFA	BCA	CBA	AAA	TAT	TTC	CCA	ATA	CTT	DAA	TTC	TGT	GAT	AGA	ARA	ATG	TTT	AAC	TCA	GCT	ACT	ATA	ATC	
2498	CCA	TAA	TTT	TGA	AAA	CTA	TTT	ATT	TGG	CTA	GTT	TCT	GCT	CTT	ACC	TTA	TGT	GTT	GTT	CAG	ACT	CCC	AAA	CAT	CAG	TGT	CAG
2499	GAC	AGG	BGA	ANA	TGA	BAG	CCA	GTT	TCT	GCT	CTT	ACC	TTA	TGT	GTT	GTT	GTT	GTT	GTT	CAG	ACT	CCC	AAA	CAT	CAG	TGT	CAG
2500	ATC	BAG	TGG	TCT	GAA	TCT	CTG	TCT	GAA	GCA	TGG	AAC	TGA	AAA	GAA	TGT	AGT	ATC	AGT	ATC	AGT	ATC	AGT	ATC	AGT	ATC	AGT
2501	GCC	TGA	GAA	TAT	CTT	CBA	AGG	GTC	AGA	CTC	AAT	TFA	CTT	TCT	AAA	GAA	GTA	GCT	AGG	ATC	TAG	GBA	ATA	ACT	TAG	AAA	
2502	CBA	ABA	GAT	TGT	ATA	TAT	GTG	CAT	CCT	GGC	CCC	ATT	GTT	CCT	TAT	CTG	TAG	GBA	TAA	GGC	TGC	TTT	TTT	GTT	TGT	CTG	
2503	TAT	ATA	TAA	CTG	TAT	ACA	CTT	ACA	CTT	ACA	TGG	AGC	CTT	TCC	TGT	TFA	CTT	CAI	ATC	ATC	CTT	GTT	GTT	GTT	GTT	TCC	
2504	TTT	CTC	AGG	GGC	GGA	GGC	GGC	TCC	CAC	GST	GTC	CAT	CTT	CCT	CCC	CAG	CAT	GBA	ACA	GCT	GAC	CTC	TGS	GGG	AGC	CAC	
2505	GGG	GCT	GTC	CTT	GTA	CTT	CTA	CCC	CAG	AGA	CAT	CAG	CTT	GAA	CTG	GAA	CTG	GAA	CTG	GAA	CTG	GAA	CTG	GAA	CTG	GAA	
2506	GGT	GBA	GTA	GBA	GBA	CAA	CCT	GTA	CAC	CTG	GBA	GGT	GGT	GCA	GBA	GAC	CAG	CAT	GAG	CAG	CAT	GCT	GGT	CAA	GTC	CTT	
2507	CBA	GGC	BAA	GBA	GTG	TTG	ATG	AGA	GGC	CTC	AGA	GGC	CAC	CAG	CAC	CAG	CTC	CCC	AGC	TCC	ATC	CTA	TCT	TCC	CTT	CTA	
2508	AGG	TCT	TGG	AGG	CTT	CCC	CAG	AGA	GTC	ACT	ACT	GTT	GAG	GTG	CTC	CBA	ACT	TCC	TCC	TCC	CTA	CCT	CCT	CCT	CCT	CTC	
2509	CCT	CCT	TCT	TGG	CTT	TFA	TCA	TGC	TAA	TAT	TTG	CAG	ARA	ATA	TTT	AAA	GGT	AGT	CTT	TGC	ATC	GTT	TGC	ATC	TGA	GAT	CTC
2510	TGT	CTT	TCT	TAC	TAA	ATG	GTA	GTA	ATC	AGT	TGT	TTT	TCC	AGT	TAC	CTG	GGT	TTT	CTT	TCT	AAA	GAA	GTT	AAA	TGT	TTA	
2511	GTT	GGC	CTG	AAA	TCC	ACC	ACA	CTT	AAA	GBA	CTA	AAA	CCC	CTA	ACC	CTT	TGC	CTT	TGC	TCC	ACT	ACA	GGT	AAA	TGT	TTA	
2512	TCC	TTT	CTA	AGG	TTC	AGG	ACT	AAT	CAT	GGC	TTA	TTT	CTG	TGG	GCC	ATG	GTA	GGT	TTG	AGG	AGG	CAI	ACT	TCC	TAG	TAG	
2513	TTT	TCT	TCC	CCT	AGG	TGG	TCA	AAG	TCC	TGA	AGG	GGG	ACA	GTC	TTT	ACA	AGC	ACA	TGT	TCT	GTA	ATC	TGA	TTC	AAC	CTA	
2514	CCC	AGT	AAA	CTT	GGC	GAA	GCA	AGG	TAG	AAT	CAT	TAT	CAC	AGG	AGG	CAA	AGG	CAA	AGG	CAA	TGT	GCA	AGC	AAT	AGG	AAA	
2515	ATG	TGG	BAG	CCC	ATC	ATA	GTA	CTT	GGA	CTT	CAT	CTG	CTT	TTG	TGC	CTT	CAC	TAA	GTT	TTT	AAA	CAT	GAG	CTG	GCT	CCT	
2516	ATC	TGC	CAT	TGG	ACA	GGC	TGG	GCA	CTA	CCC	ACA	ACC	TAC	TTT	TAC	GGC	CTT	CAC	TAA	GTT	TTT	AAA	CAT	GAG	CTG	GCT	
2517	BAA	ATT	TGG	GAA	AAG	TTC	TAC	CAA	GCT	GAG	AGC	TGA	TCA	CCC	CAC	TCT	TAG	GTG	CTT	ATC	TCT	GTA	CAC	CAG	AAA	CCT	
2518	TAA	AGA	GCA	ACC	AGT	ATT	BAG	AGA	CTC	ATT	TAT	GAA	AGT	CTA	AAA	CTG	GAT	ACA	ACC	AAA	ATG	TCC	ACC	AAC	AGT	TAA	
2519	ATT	ATG	ACA	TGT	TCA	CAA	TTT	AGC	TAT	TAC	TTA	ATA	AGG	AGA	ATT	AAA	ATA	AAA	CTT	AAA	CTT	AAA	AGC				

Figure 12 contd

6241 ACA ACT GCT TCC CTG CTG GTG TGA TAT CTG TTT TGC TTT TAT GTT AGC ATA ATA TTA TAA GGA ATG TTT GTG TGA ATA
 6319 AAC CAA ACA TAT TTT AAA AGC AAA TAT TGT AGC CAC ATC CTA ATT GCT AAA AAG TTT ACA GCT AAT AGT CCC ATG CTC
 6397 TCC ACA ATA CTG GAT CCA AAT AAG TCC TAA TTT CAA TGT TGG GCA TCT TTA CAG AGA GAA AGA CAT TAA AAA TGA TGA AGA
 6475 GAC ATG CAG AGA GTG CAC CAT GCC ATC CAC CAT GGC ATC CAC CAT GGC TGA TGA TGA TGA TGA TGA TGA TGA TGA TGA TGA TGA
 6553 TCC AGA AGC CAC CAA AAG AAG GAG GTA TGA AGT GGT TTC TCC CTG AGA GTA TCC AGA GGA TAA ACC AAC CAA CAC
 6631 CTT TTT GCT TTA GAC TTC TTG CTT TCA GGA CTG TGA GAA GGT AGC ATC TTA TTA TTA TTA TTA TTA TTA TTA TTA TTA
 6709 TTG TTA AGS TAG AGT CAA GAA GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT
 6787 ATT TTT GGT TTT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT
 6865 GGG GTT TTT TTG GGT TTT GGT TTT GGT TTT GGT TTT GGT TTT GGT TTT GGT TTT GGT TTT GGT TTT GGT TTT GGT
 6943 TTT TTG TTT TTT TGA GAC AGT GGT TCT CTG TAT AGC CTT GGC TGT CCI GGA GTT CCT TCT AIC TCT AAT GTC TAC AIC
 7021 TCA GAG GGG ATC CTC TAA TTT CAA ATG AGC AGT AGC TCT CCA TTT TTA GCT CTT APT TAT TCA TTT ATT TAC TTA CTT
 7099 ACT TAT TGT CTG TAG ATG AAA GAA TTT TGG AGT GGG AAA GGG TTC ATG AGC CCC CAG CAA CTA ATG AGG AGC TAC AGA
 7177 CAA TTG ATG TTT CTG GGG AAA GGA GAC TCA GTT TCT TTG AGA GTA TAG CTT CTG ATG GGT CAA CCA TGT TCC TGT GGC
 7255 TGA TGT CAC ACC CAG CAG TAT GCA GAC AAC AGA AAC TGG AGT TAA TGA GTT GGT TTA AAA ATA AAA AAG GGC ATG AAG
 7333 CTT GGG ATA GAA ATT AAG GAT AAA TAC AAT TAA ATA CAG GAA ATT CTG AAA GAA TTA ATA AAA ACA TTT CTT TTT TTA
 7411 AAA AAA AAT CCA GAA TTA GCT ATG CTT CTT CAA AAT TGC TTC TGG AGA ACT TTA CAA GTT AAA TAA GTT ATA TTG TAG
 7489 AAA AGG TAG AGA GGA TGA TAG TGG AAG AGA GAG ATA AGS AGA CTT CAA AAG GAG TGG AGG GAG ATA GAG GAG GAG AAA
 7567 GCA GAA GCA ATG GCT GAT AGA CAC AGS ATA AGA GGG AAC AGA AAG GAG AAA GGC AGG ATG GGT AIT TCT TTG
 7645 CCT AIC TGT GAC TTG CAC ATG GTC TTG GCA ATT ATT GAT GAG TTC AAG GCT TAA TTC TTT ACT TGT GGC AAC TCA ACA
 7723 GAG TCT TTC TTT CTT ATA ACC AGS CCC CCA GTA TGC TCA TGT ATG TAT CAG GTC CTC TTA TCT CTT TAT AGC AAT CCT
 7801 GTT TAT AAC TGG GTA ACT TTG TGA AGS GAA GGA AGT GCA CAC TGA GAT GTG CTA CAA GTT TTT AAT ACA AAA TTT TGA
 7879 AGA GAT TGT ACA ATG TAT GTA TAA TTA ATA ATT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT
 7957 CTA TAT ATA TGG GTT AAA TCA ATA TAT TAA TTA GTT TAA TTT CAC ATG CTT ATT ATT GTG GTT TTT GAG ACA GGG
 8035 TTT CTC TGT ATA GCC CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT
 8113 CAG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT
 8191 CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT
 8269 CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT CTG CTT
 8347 TCT CAT TCT ATT TCT ATC AGA TAG GAC TGT GCT ARA CTA ATA AAT GTG CCC TCA AAA GTA AIC GCA AGT
 8425 TGT ATT GTT GTT GTT TTG CTT TGC TTT GCT TTG TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT
 8503 CTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT TGC TTT
 8581 GAA GAA AGA ATC TTA CTA TGA AGC TCT GAC TGT GCT ARA CTA ATA AAT GTG CCC TCA AAA GTA AIC GCA AGT
 8659 ATC TGC CTT CTT CTG CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT
 8737 CAA AAG TTT CTA GAC TTS ACA TTA ATC GAT GGA GAT AGA CAA TTA CAC AAA GAA CTA ATG TGG AGT TTA CCT GAA
 8815 TCA TAC TCT ATA CTT TAT CAG AGA TTA AAT TAA CAT TTA ATA ATC CAG TGC CAG GCT AGA GGC ACC ATT CAA TGG CAG
 8893 TGT TTG CCA TCA TGC ATA GGC TTA GTC TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT
 8971 ACT GGG AAA GAC TTG CTT CAG ATT CTC TAC TGA AAG GCT GAT TTT GTG GCT TCT AGA AAA TCT TTT ACT TTT AAT AAT
 9049 TTT AAT GTA TAA TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT
 9127 AAT ACA TGG ACA AAA TAC AAG AAT CAT ATG ATC ACC TCA ATG GAA GAA AAA AAA AAA AAA AAA AAA AAA AAA AAA
 9205 AAG ATT CAA CAT TCA TTC TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT
 9283 CTT TCC CTT GGC CTG CTC CAC AAC CCA CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT
 9361 TTC AAA AAA CCA AGG GCT TCT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT
 9439 CAG CTC TGG GGG TTA CTG GTT AGT TCA TAT TGT TAG TCC TCC TAT AGA GTT GCA GAC CCC TTT AGC TCC TTG GAT ACT
 9517 TTC TCT AGT TCC TTC ATT AGG GGC CTT GTG TCC CAT CCA ATA GAC TGT GAT CAT CCA CTT CTG TAT TTG CCA GGC
 9595 ACT GGC ATA GCC TCA CCA GAA AGA GAG AGC TAT GTC AGG ATC CTG TCA GTA AAA TCT TTC TGG CAT ATG CTA TAG TAT
 9673 CAG GGT TTG GTS GPT GTA TAT GGG ATG GAT CCC CAA GTG GAG CBG TCT CTG AAT GGT TCT TCC TTC CAT CTC AGC TCC
 9751 AAA CTT TCT CTC TAT AAC TCC TTC CAT GGG TAT TTT GGT CCC CAT TCT AAG AAG GAG TGA AGA ATC CAC ACT TTG GTC
 9829 TCC CTT CTT GAG TTT CAT ATG TTG CAT CTT GGA TAT TCT AAG TTT CTG GGT TAA TAT CCA GGT AIC AGT GAG TGC
 9907 ATA TCA TGC GTG TTA TTT TGT GAT TAG TTT ACC TCA CTC AGG ATG ATA TCC TCC AGA TGC ATC CAT TTG CCT AAG AAT

9585	TTC	ATT	AAT	TCA	CTG	TTT	TTA	ATT	GCT	GAA	TAG	TAC	TCC	ATT	TTC	TGT	ATC	CAT	TCC	TCT
10063	GTT	TCA	GGG	CAT	CTG	GGT	TCT	TTG	CAG	GTA	TAT	GCC	CAG	SAG	AGG	AAT	ATG	AGC	GAT	GTG
10111	TTA	TCA	AGT	TGG	AAC	ATC	TTT	CAG	GTA	TAT	GCC	CAG	SAG	AGG	AAT	TGC	TGG	ATC	TTT	
10219	TTT	TTA	ATA	AAA	GCC	CTA	GAA	GAA	CTG	TAG	GAA	ACA	TAT	TCC	AAC	ATA	ATA	AAG	GTT	
10297	ATG	ACC	AAT	ATC	ATC	ATA	AAT	GRA	TGA	TGA	TAC	ATC	CCA	TTA	AAA	TCA	GAG	GAC	TGC	
10375	CTC	ATC	CAT	AAT	GAG	ATT	GRA	GCA	TTA	GCT	GGA	CAI	GAA	GAG	AAI	TGA	AAA	TGG	GAA	
10453	AAT	TGT	TTT	CAA	TTG	AGG	ATT	ATA	TTA	TCT	TAT	ACC	ACA	TCC	TTA	TTT	TTC	TCT	CTT	
10531	AAT	AAT	TTT	AGC	AAA	GTT	TTA	TGA	TGC	ACC	ACA	TCC	TTA	TTT	TTC	CCA	GCT	TCT	TTC	
10609	CTT	CAT	CTT	CTT	TGT	TCT	TCC	ATC	TGC	CTG	CAC	TCT	TGT	CTC	AAT	GAT	AGC	GTG	TAA	
10687	GTA	TCT	CAC	ABA	ACG	TTT	CTC	TTG	CTC	CCA	AGT	GAT	SAG	CCC	TTT	GTC	TTG	CTA	TGA	
10765	CTC	AAG	AAG	GAA	ATG	ACA	GCG	AGG	AGG	TAA	TAA	TGA	ATC	GGG	GAA	GGC	TGA	CAT	TAG	
10843	TAA	TTT	CTC	ATA	CTT	CAC	ACT	GAG	ATG	TTA	TTA	ATC	CTG	ACT	CAI	AGG	TGA	AGA	AGC	
10921	TGA	GTT	TTA	TAG	AAT	GAG	TAG	AGC	AGT	AGT	TCT	CAA	ACT	ATG	AGT	GAT	GAT	TCC	TTT	
10999	CAC	AGG	TTG	CAT	ATC	AGA	TAT	ACC	AAT	TTT	ATA	GTT	GTG	GGT	CAT	GGC	AAC	TAT	ATA	
11077	GGA	AAA	TTA	TTT	AGT	AAT	CAT	TTT	ATA	GTT	GTG	GGT	CAT	GGC	AAC	ATG	AGG	AAC	TGT	
11155	GAA	TGT	TGA	GAG	CCA	CTG	TAA	TGA	GCT	CTG	TAT	AAA	GAA	CAI	GGG	CTA	TAA	AGC	CCA	
11233	ACA	TTT	GCC	ACA	TGG	TAA	GCT	CTG	TAT	CTG	TAT	AAA	GAA	CAI	TGG	TTT	GTA	ATT	TTA	
11311	CTG	TCT	ATC	ACC	CAI	TAT	AAT	AAA	TAC	ATA	AGT	TTT	GAT	TCC	ACC	ATG	GAT	TCA	AAT	
11389	AGA	CAT	AGC	AGT	GAA	ACA	TTTG	ATG	ACC	AAA	TAG	GAA	ATC	ATA	GTA	GAG	ACC	TTT	TAT	
11467	CCA	TCT	TAC	ACA	AGG	GTT	CTA	CTT	TGC	TAC	CAG	TAA	TGA	ATA	CAG	TGT	CTC	AAC	TCC	
11545	CCC	CTG	AAA	TGA	CTT	GTA	CTA	CTT	TTC	TTA	AAG	ACA	GRA	AAI	GAA	AGG	CTA	AGA	CTT	
11623	GAT	CAT	GCA	ACC	AAT	TAA	GTC	ORA	CTT	GSC	CTG	ATC	AGG	AGG	CAC	AAT	TCA	AAA	GCA	
11701	TTG	TGT	ATG	GTT	GCT	GAT	TCC	GGG	AGC	GTA	CTA	GTC	AGT	AAI	CTC	CCT	AGT	GGG	AAA	
11779	CAT	TTA	ACA	GAT	TAG	GAG	ATG	AAA	CGG	TAG	ATC	CTG	TGT	AGT	TGT	ACA	CGT	TGG	TCC	
11857	GGC	AGG	AGG	TCC	TCS	AGC	TCA	AAI	CAG	CTT	AGG	CTA	CAC	AGA	GAA	ACT	ATC	AAA	AAA	
11935	GGA	GAT	TGG	ATG	TTA	AGA	TCT	GCT	CAG	TAA	GAG	GCA	GAA	TTG	AGA	TTT	GAA	CTC	AGT	
12013	AAA	TTG	CAG	TAA	GGA	TCT	RAG	TGT	AGA	TAT	ATA	ATA	ATA	TTT	TTC	TAT	TGA	TCT	TAT	
12091	TTG	TTT	GGA	AAA	AAA	TAT	TTT	TAT	CAG	CCA	ACA	TCT	TCT	ACC	ATA	TTA	TGA	TAT	TGA	
12169	CCC	ATC	CCC	CAT	ACC	AGA	CTG	GTT	ATT	ATT	CAT	TAT	GAG	TGG	CCT	GAG	AAG	AAT	AAA	
12247	TTG	GGA	GTG	TCC	CAT	GGA	CTA	AGG	ATA	TAG	CAA	CTG	TCA	CCG	TCA	CAC	TGC	TTT	GAT	
12325	AAC	TGA	AAA	CAG	AAC	CTT	AGG													

VKP-IGKV1-39/J-Ck-Δ2

1	GGC	CGG	CCC	ACA	TGA	AAC	AAT	GGG	AAC	CAT	CTG	ACA	ATC	ACA	GAG	GTG	TTG	TTA	CTA	TAG	CAA	AAG	GGA	TTG	TTA	CTC
79	TCC	ACA	TCC	CTT	TAA	GTA	ACT	TGA	AGG	CTC	GAT	AGA	CCC	ACC	CTC	TAA	GAC	TTT	AGA	CAT	TCC	CTA	CGA	ATT	GTT	
157	ATA	CTA	TCC	TGT	ATA	CTC	CCA	ATA	CAA	CCT	TAG	AAT	ATA	TTA	TTA	CAT	ATA	GTC	ATT	AGG	TTT	GTA	TTA	AGA	TTT	
235	TTT	TTT	CTC	TCA	AAA	TAT	CTC	TTG	TOA	CAA	CAG	CGG	CTC	TAG	AGA	GAA	ATA	CAT	TCC	CTC	CAG	GCA	ATT	CTA	TGC	
313	GCT	GCT	CTG	ACT	TGG	GAC	ATT	GCC	CTT	GTG	CTG	ATT	TAC	TAA	GAT	GAG	CCA	GCC	CTG	CAG	CTG	TGC	TCA			
391	GCC	TGC	CCC	ATG	CTC	TGC	TGA	TTG	ATT	TTC	ATG	AGC	ACA	GTC	CCC	TGC	CTT	GGA	GAC	TTT	TTT	ATG	GGC	TGG		
469	TGC	CAC	CTT	GTC	CAG	TCA	GTC	TCA	GTC	ATG	AGC	CAC	CAT	GGA	AGT	GAG	AGT	GCC	GCC	GCT	GGG	GCT	CCT			
547	GCT	ACT	CTG	GCT	CCG	AGG	TAA	GGA	TGG	AGA	ACA	CTA	GAT	TTT	TAC	TCA	GCC	AGT	GTG	CTC	AGT	GAC	TGG	ATC		
625	AGG	GAA	GTT	CTT	TGA	TAA	AAT	GAT	TAG	TAA	GAA	TAT	TTG	TTT	TTA	TGT	TTC	CAA	TCT	CRG	GTG	GCA	GAT	GTG		
703	TGC	GAA	TGA	CCC	AGA	GCC	CTA	GCA	GCC	TGA	GGC	CCA	GGG	TGG	GGG	ACA	GAG	TGA	CTA	TCA	GCT	GCA	GGG	CCA		
781	GCA	TCA	GCA	GCT	ACC	TGA	ACT	GST	ATC	AGC	AGA	ASC	CCG	GCA	AGG	CCC	CCA	AGC	TGC	TGA	TCT	ACG	CCG	GCT		
859	TGC	AGA	GGG	GGG	TGG	CCA	GCA	GAT	TCA	GGG	GCA	GGC	GCT	CCG	GCA	CCC	AGT	TCA	CCA	TGA	GCA	GCC	TGC	AGG		
937	CCG	AGG	ACT	TGG	CTA	CCT	ACT	GCC	AGC	AGA	GCT	ACA	GCA	CCC	CCA	CCT	TCG	GGC	AGG	GCA	ACG	TGG	AGA	AGG		
1015	TTA	BAC	GTA	AGT	ACA	CTT	TTC	TCA	TCT	TTT	TTT	ATG	TST	ABG	ACA	CRG	GTT	TTT	ATG	TTA	GGA	GTT	AAA	GTC		
1093	GAA	AAT	TTG	TCA	CAA	AAT	GTC	AAA	ATG	AGA	AGG	GCT	CAT	TAT	CAG	TTG	TGG	CTA	GAT	TCT	CTG	TTT	ATC	AGA		
1171	GTG	AGA	CTT	GAG	AAA	ATG	AGA	GAG	GCT	TTT	AGT	TGA	GAG	GAA	AGT	AAT	TAA	TAC	TAT	GTG	CAC	CAT	CCA	AGA		
1249	GGA	GAA	TAA	GCA	TGA	GTA	GTT	ATT	GAG	ATC	TGG	GTC	TGA	CTG	CAG	GTA	CGG	TGT	TCT	TCT	AGA	CGT	TTA	AGT		
1327	TTT	GGA	GGG	GAT	GAG	GAA	TGA	AGG	AAA	CTC	AGG	ATA	GAA	AAG	GGC	TGA	AGT	CAA	GTT	CAG	CTA	AAA	TGG	ATG		
1405	GAG	CAA	ACT	TTG	AAG	ATA	BAA	TGA	ATG	ACC	CAG	AGG	ATG	AAA	CAG	CGC	AGA	AGA	ABG	GGC	CTG	GAG	CTC	TGA		
1483	GAG	AAG	GAG	ACT	CAT	CCG	TGT	TGA	GTT	TCC	AGA	AGT	ATC	GTG	TTG	AGT	TTT	TCA	ATA	AAA	GTG	GGA	CTG	TGA		
1561	GTG	AOC	GCT	AGG	CTG	AGT	TCT	CTC	TTT	TGT	CTC	CTA	AGT	TTT	TAT	GAC	TAC	AAA	AAT	CAG	TAG	TAT	GTG	AAA		
1639	TCA	TTA	AGC	TGT	TTG	BAA	TGA	TOA	CTG	CTT	GGC	ATG	TAG	ATA	CCA	TGS	CTT	GCT	GAA	TAA	TCA	GAA	GAG	GTG		
1717	TTA	TTC	TAA	AAT	TTG	TCA	CAA	AAT	GTC	AAA	ATG	AGA	GAC	TCT	GTA	GGA	ACG	AGT	CCT	TGA	ACA	GCT	CAA	GGG		
1795	TTT	TTT	CTT	TGT	CTC	ATT	TCT	ACA	TGA	AAG	TAA	ATT	TGA	AAT	GAT	CTT	TTT	TAT	TAT	AAG	AGT	AGA	AAT	ACA		
1873	TTT	GAA	TAT	TAT	GTT	TTA	ATT	ATG	GCC	AGG	GTT	TTG	TAA	GAC	ATT	TGG										

Figure 12 contd

3583 TGT CTT TCT TAC TAA ATG GTA ATC AGT TGT TTT TCC AGT TAC CTG GGT TTC TCT TCT TAA GAA GTT AAA TGT TTA
 3587 GTT GGC CTG AAA TCC ACC ACA CTT AAA GGA TAA ATA AAA CCC TCC ACT TGC CCT GGT TGG CTG TCC ACT ACA TGG CAG
 3745 TCC TTT CTA AGG TTC CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT
 3823 TTT TCT TCC CCT CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT
 3901 CCC AGT AAA CTT GGC GAA GCA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT CTA AGG TCT
 3979 ATG TGG CAG CCC ATC ATA GTA CTT GGA CTT CAT CTG CTT TTG TGG CTT CAC TAA GTT TTT AAA CAT GAG CTG GCT CTT
 4057 ATC TGC CAT TGG CAA GGC TGG GCA CTA CTT CAC ACA CTT TAC TTT CAG GAC CTC TAT ACC GGT AGA TTA CAC ACA TAC ATC
 4135 AAA ATT TGG GAA AAG TTC TAC CAA GCT CAG AGC TGA TCA CTT TAG GTG CTT ATG TCT GTA CAC CAG AAA CTT
 4213 TAA GAA GCA ACC AGT ATT GAG AGA CTC ATT TAT GAA AGT CTA AAA ACC AAA ATG TCC ACC AAC AGT TAA
 4291 ATT ATG ACA TGT TCA CAA TTG AGC TAT TAC TTA ATA AGG AGA ATT AAT NAA ATA AAA CTT AAG AGC ATA GTT TAA TCT
 4369 CAT AAA CAA GAT AAT AAG CAA AAC AAA ACA TTT TTT CAT CCA TGT AAG TTT AAA AGC AGG TAA AAT TTA AAA TTA AGA
 4447 GAG ACA TAA GTT TTG AGG TAG CAA GAT GGA AAC TCT GGG GCT TGG GGA AIG TTC TGT CTC TCT GTA TGG GAT GTG AAA
 4525 GTT ACT ATT GTG GAA TTG GGA TCT AIG TTT CTT AIG TTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT
 4603 CTA ATA CCC AGT GCA TAC ATA AAA GAG GAT ACA AGG AAT GAA TCA TAC GTC CAC GGC AAA AAG ACA ATA AAG TAG GGG
 4681 ATC CAG GAT CAA ATC TCC CAC AAC CTT GAG CTT TCT ACT ATT CTG CCT TCC AGA GCT CAA AAT ACA AAA CAC ATA ATT
 4759 CAA ACA CAT GAT CCC TCC TTG GGG TCT CTT CTT TCA TGG ATC GAA TTA GAA ATG TAT AAA ATG AGA TAG AAG
 4837 AGA CCT TCA TCA ACA GGT CAA AGA ATA TAG GTA ATT TTG TCT GGG TAT GAA GAG CCC AGT TAT CAA AGG TTA CAT TAG
 4915 GGA AGG CAG AGG ACA CTA ACA GTG ACT TTC ATT CTC CCC CTC TTC CTG GAG GGC CCT GCA TTT AGT CCG TCG TGG GCT
 4993 CAT CCA CTC AGC ACA CAT TTA CTA AGC ATC TTC TCA GCC TAC ACT CTG AAG GCA GTG CAG AAT AAT GTT AGT GTC CTT
 5071 TCC CCC AGT TAA TAT GCA GTC CAG TTT CCC TGT TCC TCT TCC TAC CTC TTG AGA AUG TAC ATT AAT AGC CAC GTG GAC AGT
 5149 CAC CAA ATA GGA GAG GGC AAC CTT TTG CTT TCC TAC CTC TCC TCA GTC CAC ATA AAG AGG ATC ATT AGT CCG TCG TGG GCT
 5227 TTA ATT GCT TTT TTT TAA TTT GTC TTT TCA AAT AGC ATA ACC TTG TTC AIC CAT TTC TGG GAA CCA AAT TTA TCA ATC
 5305 AAC AGT GCT TCT AAT CTG GCT AAT AAT ACA AAA AUG CTT CCA AAT ATA TTT GTT CCA GTT TTA TCT AAA ACA GAA
 5383 CCC ACA ATA AAA AAG AAG AAA GAA TAC ATA TAA GCA TTT ATA TTA TTC TGA SCA ACC TTG TGC TTT GTG AAA ATA
 5461 TAA TCT AAT GTC ACA TGC TGT ATT CTT TTT TTT TAA CAC TGG TGA AAT TAT AAT ACA AAG AAG AAA GAA GAC AGA TCA
 5539 CTG ATC CTA GGA TCT AGG GAT GTT ACA GAT AAG AAA ACA AAT GTG ACA AAG AGC TGT CAC AAG GAG GAT CTT CAA GGT
 5617 CAC AGA ATC ACT GTC TTG ATT TCA GTG GTG GTT ACA TAC ATA TTA ATA TGT GAT TTT AAC TTT GTG AAC TAT ATT CAT
 5695 ATA TTG TAC CAA TGT CAA ATG CTT AAT TTT GGC TCT ATA GTA TAA TTA TGC ACT AAA TTA CTA TTT GCA CAA AGA AAA
 5773 TGA TGT TTA CAT CAA AGG TGA GGC CAT ATT TGT TAG GAA CAT AAC TTA AAA ACC ATT TTG GAT AAC TAA TGA AAA GCC
 5851 ATT TTG TGT GGC TTG GCA TAT CAT GCC TAA GCT GTC ACC AGA TNG ATC TAA TAA GAC CTC AGC CTC AGA AGC AAG CCC
 5929 CTG CCC AGC AAG CAG GCA GCA CAG ATA AGA GCT AAA CCC AGG ACA GGC CAT GAT AIG CTA ATG AAC TAC CTT CAA GGT
 6007 GGT GCT GAT CTA GTG AAC CAG CCC CCA GCT AGC CCC RAT AGC ACA AAG CTA CTG CCC AAA GAA ATT ATA CAA
 6085 AAA TTG GAA CTT TGG GAA TGG TGT GCA GGA TCG TGT GTC TGG TGT AIG CTT GGA ACA CAG CTT CTC TAT GTT TTG TAT TGA
 6163 TAC CAG TCT AGA AGC TTC CAA AAC TTT CTC ACT GAA GAA GAT TCC CCA TGT GGG ACC CTT ACA GAG TCT TTT GCC CAA
 6241 ACA ACT GCT TCC CTC CTG GTG TGA TCA TGG ACC AAG ATA GCA ACT GTC ATA GTT ACC GTC ACA CTG CTT TGA TCA AGA
 6319 AGA CCC TTT GAG GAA CTG AAA ACA GAA CCT TAG GCA CAT CTG TTG CTT TCG CTC CCA TCC TCC AAC AGC AIG GCT
 6397 GTC TTC ATA TTT GTT CTA GAC GGC CGG CC

Vkl-IGLV2-14/J-CK
 1 GGC CGG CCC ACA TGA AAC AAT GGG AAC CMT GTG ACA ATC ACA GAG GTG TTG TTA CTA TAG CAA AAG GSA TTG TTA CTC
 73 TCC ACA TCC TGT TAA GTA ACT TGA AGG CTT GAT AAG CCA ACC CTC TAA GAC TTC ATT AGT TCC CTA CCA ATG GTT
 137 ATA CTC TCC TGT ATA CTC CCA ATA CAA CTC TAA AAT ATA TTA TTC CAT ATA GTT CTT AGT TTT GTA TTA AAG TTT GAC
 235 TTT TTT CTT TCA AAA TAT CTC TTG TCA CAA CAG CGG CTA TAG AGA ATA ATT TCC CTC CAG GCA AAT CTA TGC TGC
 313 GCT GGT CTG ACC TGG GAC CCT GGG GAC ATT GCC CTT GTG CTG AGT TAC TAA GAT GAG CCA GCC CTG CAG CTG TGC TCA
 391 GGC TGC CTT ATG CCC TGC TGA TTG ATT TTT AGG GAC TTT TTT AIG GGC TGG
 469 TCG CAC CTT GTG CAG GAG TCA GTC ATG AGG AGC CAG CAT GGA CAT GAG AGT GGC CCA GCT CTT GGG GCT CTT
 547 GCT ACT CTG GCT CCG AGS TAA GGA TGG AGA ACA CTA GGA AIT TAC TCA GCC AGT GTG CTC AGT ACT GAC TGG AAC TTC

Figure 12 contd

625 AGG GAA GTT CTC TGA TAA CAT GAT TAA TAG TAA GAA TAT TTG TTT TTA TGT TTC CAA TCT CAG GTG CCA GAT GTC AGT
 793 CTG CCC TGA CCC ABC GCT CCT CTG TGT CTG GCA GGC CTG GCC AGA GCA TCA CCA GCT GCA CCG GCA GAT GTC AGC
 781 ACG TGG GCG GCT ACA ACT ACG TGT CCT GGT ATC AGC AGC ACC CCG GCA AGC CCG GCA TGA TGA TCT ACG AGG TGT
 559 CCA ACA GAC CCA GCG GCG TGA GCA ACA GAT TCA GCA GCA GCG ACA CCG GCA GCG TGA CCA TCA CCA GCG GCC
 937 TCC AGG CTG AGG ACG AGG CCG ACT ACT ACT GCA GCA GCT ACA CCA GCA GCT CCA CCC TGG TGT TTG GCG GAA CAA
 1015 AGC TGA CCG TGC GTG AGT ACA CTT TTC TCA TCT TTT ATG TGG ACG ACA CAG GTT TTC ATG TTA GGA GTT AAA
 1033 GTC AGT TCA GAA AAT CTT GAG AAA ATG GAG AGG GGT CAT TAT CAG TTG ACG TGG CAT ACA GTG TCA GAT TTT CTG TTT
 1171 ATC AAG CTA GAG AGA TTA GGG GCA AAA GGC TTT GAT TGA GAG AAA AAT TAA TAC TAT GGT TCT TCT AGA CGT TTA
 1249 GAT TGG ATC GGA TAA GCA TGA GTA GTT ATT GAG ATC TGG GTC TGA CTG CAG GTA CCG TGS TCT TCT AGA CGT TTA
 1127 AGT GGG AGA TTT GGA GGG GAT GAG GAA TGA AGG AAT TTC AGG ATA GAA GAG GGC TGA AGT CAA GTT CAG CTC CTA AAA
 1405 TGG ATG TGG GAG CAA ACT TTG AAG ATA AAC TGA ATG CAG AGG ATG AAA CAG CCG AGA TCA AAG AGG GGC CTG GAG
 1483 CTC TGA GAA GAG ARG GAG ACT CAT CCG TCT TGA GTT TCC ACA AGT ACT GTC TTG AGT TTT GCA ATA AAA GTG GGA TAG
 1561 CAG AGT TGA GTG AGC CCG AGG CTG AGT TCT CTC TTT TGT CTC CTA AGT TTT TAT GAC TAC AAA AAT CAG TAG TAT GTC
 1639 CAG AAA TAA TCA TTA AGC TGT TTG AAA GFA TGA CTG CTG GTC CTG TGT GCT GAA TAA TCA GAA GAG
 1717 GTG TGA CTC TTA TTC TAA AAT TTG TCA CAA AAT GTC AAA AAG AGA GAC TCT GTA GGA ACG AGT CCT TGA CAG ACA GCT
 1795 CAG GGG GTT TTT TTC CTT TGT CTC ATT TCT ACA TGA AAG TAA ATT TGA AAT GAT CTT TTT TAT TAT AAG AGT AGA AAT
 1873 ACA GTT GGG TTT GAA CTA TAT GTT TTA ATG GCC ACG GTT TIG TAA GAC ATT TGG TCC TTT GGT TTC CCA GTT AAT ACT
 1951 CGA TTG TAA TTT TAT ATC GCC AGC AAT GGA CTG AAA CAG TCC GCA ACC TCT TCT TTA CAA CTG GGT GAC CTC GCG GCT
 2029 GTG CCA GGC ATT TGG CGT TCA CCG TGC CCG TAA GGG CCA TGT GAA CCC CCG GCG TAG CAT CCG TTG CTC CCG GTG GAC
 2107 CAC TTT CCG GAG GGA CAG TGA TAG GAA CAG AGC CAC TAA TCT GAA GAG AAC AGA GAT GTG ACA GAC TAC ACT AAT GTG
 2185 AGA AAA ACA AGG AAA GGG TGA CTT ATT GGA GAT TTC AGA AAT AAA ATG CAT TTA TTA TAT TCC CTT ATT TTA ATT
 2263 TTC TAT TAG GGA ATT AGA AAG GGC ATA AAC TGC TTT AUC CAG TCT TAT AIT AAA AGC TTA ATG TAT ATA AIT TTT TAG
 2341 AGG TAA AAT CTA CAG CCA AAA GTC ATT TCT GAC AIG ACC CTA ACT GGT TAG GGA TAT TTT TCT TCA TGC AAA
 2419 TCA TAT TAA CTG GTT AAA TTA ATA TAA ATT TCT GAC AIG ACC CTA ACT GGT TAG GGA TAT TTT TCT TCA TGC AAA
 2497 AAT AUC ACT AAT AAT AAT TTA GCA CAA TAT TTC CCA ATA CTT TAA TTC TGT GAT AAA ATG AAA ATG TTT AAC TCA GCT
 2575 ACT ATA ATC CCA TAA TTT TGA AAA CTA TTT ATT AGC TTT TGT TGA CCC TTC CCG CAA AGG CAA CTA TTT AAG
 2653 GAC CCT TTA AAA CTC TTG AAA CTA CTT TAG AGT CNT TAA GTT ATT TAA CCA CTT TTA ATT ACT TTA AAA TGA TGT CAA
 2731 TTC CCT TTT AAC TAT TAA TTT ATT TTA AGG GGG GAA AGG CTG CTC ATA ATT CTA TTG TTT TTG TTA AAG AAC TCT
 2809 CAG TTT TCG TTT TTA CTA CCT CTG TCA CCG RAG AGT TGG CAT CTC AAC AGA GGG GAC TTT CCG AGA GGC CAT CTG GCA
 2887 GGT GCT TAA GAT CAG AAG TGA AGT CTG CCA GTT CCT CCG AGG CAG GTG GCC CAG AAT ACA GTT GAC CTG TTC TGG TGT
 2965 GGC TAA AAA TTG TCC CAT GTG GTC ACA AAT CAG CAT TAG ACC AGG GTC TGA TGA ATT GCT CAG AAT AIT TCT GGA CAC CCA
 3043 AAT ACA GAC CCT GGC TTA AGG CCC TGT CCA TAC AGT AGG TTT AGC TTG GCT ACA CCA ARG GAR GCC ATA CAG AGG CTA
 3121 ATA TCA GAG TAT TCT TGG AAG AGA CAG GAG AAA ATG AAA GCC AGT TTC TGC TCT TAC CTT ATG TGC TTG TGT TCA GAC
 3199 TCC CAA ACA TCA GGA GTG TCA GAT AAA CTG GTC TGA AUC TCT GTC TGA AGC ATG GAA CTG AAA AGA ATG TAG TTT CAG
 3277 GGA AGA AAG GCA ATA GAA GGA AGC CTG AGA ATA TCT TCA AAG GGT CAG ACT CAA TTT ACT TTC TRA AGA AGT AGC TAG
 3355 GAA CTA GGG AAT AAC TTA GAA ACA ACA AGA TUG TAT ATA TGT GCA TTC TGG CCC CAT TGT TCC TTA TCT GTA GGG ATA
 3433 AGC GTG CTT TTT TGT GTG TCT GTA TAT AAC ATA ACT GAT TAC ACA TAA TAC ACT GAA ATG GAG CCC TTC CTT GTT ACT
 3511 TCA TAC CAT CCT CTG TGC TTT CCT CAG GGG CCG AGC CCG CTC CCA TCT TCC CCC CCA TCA GCG TGA AGT GGA AGA
 3589 AGC TGA CCT CTG GCG GAG CCA CCG TGG TCT GCT TCG TGA ACA ACT TCT ACC CCA GAG ACA TCA CCG TGA AGT GGA AGA
 3667 TCG ACG GCA GCG AGC AGA GGG ACG CCG TGG TGG TGA CCG AGC ACA CCG AGG ACT CCA GCG AGG TGG TGC ACA AGA TGA
 3745 GCA GCA CCC TGA GCG TGA CCA AGG TGG ACT ACG AGA GCG TGA CCG AGT TGT TGT ACG AGT TGA CCA GCA GCT
 3823 CCA GCC CCG TGG TGA AGT CTT TCA ACC GAA ACG AGT GAT GAA GAC AAA GGT CTT GAG ACG CCA CCA GCT CCC CAG
 3901 CTC CAT ATC TTC CTT TCT AAG GTC TTG GAG GAT TCC CCA CAG ACC TAC TAT TGC GGT GCT CCA AAC CTC
 3979 CTC CCC ACC TCC TTC TCC TCC TCC CTT TCC TTT ATC ATG CTA ATA TTT GCA GAA AAT ATT CAA TAA AGT
 4057 GAG TCT TTG CAC TTG AGA TCT CTC TCT TTC CTA AAT GGT AGT AAT CAG TTG TTT TTC CAG TTA CCT GGG TTT CTC
 4135 TTC TTA AGA AGT TAA ATG TTT AGT TGC CCT GAA ATC CAC CAC ACT TAA AAG ATA AAT AAA ACC CTC CAC TTG CCC TGG
 4213 TTG GCT GTC CAC TAC ATG GCA GTC CTT TCT AAG GTT CAC GAG TAC TAT TCA TGG CTT AAT TCT CTG GGC CAT GGT AGG
 4291 TTT GAG GAG GCA TAC TTC CTA GGT TTC CCA GTC AAA GTC CTG AAG GGG GAC AGT CTT TAC AAG CAC AAG

8115	AGC	CAG	GAT	GGG	TAT	TTC	TTT	GCC	TAT	CTG	TGA	CTT	GCA	CAI	GGT	CTT	GGC	AAI	TAT	TGG	TGA	GTT	CAA	GGC	TGA	ATT
8121	CTT	CAC	TTC	TCA	CAC	ATC	ACC	AGA	GTC	TTT	CTT	TCT	TAT	TAT	ATG	CTC	AGT	ATG	CTC	TAT	GTA	TCA	GGT	CCG	CTT	
8263	CTT	ATC	TGC	TTA	TAG	CAT	TCC	TAT	TGT	TTA	TAA	CTG	AGT	AAC	TAT	TGT	AGT	AAA	GGG	ACA	CTG	AGA	TGT	GCT	ACA	
8347	ACT	TTT	TAA	TAC	AAA	ATT	TUG	AGT	TAA	TAG	TAT	ATG	GGT	TAA	ATC	ATA	TTA	ATA	TAT	TCA	CAI	GCT	TAT	TTT	TTG	
8425	TAT	TCA	ACT	CAA	GAT	ACT	AAI	TAI	TCT	ATA	TAT	ATG	GGT	TAA	ATC	ATA	TTA	ATA	TAT	TCA	CAI	GCT	TAT	TTT	TTG	
8503	TAT	TGT	GGT	TTT	CGA	GAC	AGG	AGT	TCT	CTG	TAT	TCT	GGC	TTT	GGC	TGT	CTT	GGC	AGT	CTT	GTA	GAC	GCT	GGC	CTC	
8581	AAA	CTC	AGA	AAC	CTA	CTC	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	CTC	
8659	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	CTC	
9373	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	GCC	TCT	CTC	
9815	AAA	TTT	TTA	AAA	TTT	ATA	TAT	TTC	TAT	TCA	TAT	TTC	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	
9893	GCC	CTC	AAA	AGT	AAT	CGC	AAG	TIG	TAT	TGT	TGT	TGT	TGT	TGT	TGT	TGT	TGT	TGT	TGT	TGT	TGT	TGT	TGT	TGT	CTT	
9971	TGC	TTT	GCT	TTC	TGC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	TTC	CTT	
9949	TTT	TTT	CCG	GGG	GAG	GAG	GGG	TGG	AGA	AAG	AAT	CTT	ACT	ATC	ATC	ATC	ATC	ATC	ATC	ATC	ATC	ATC	ATC	ATC	CTT	
9127	AGG	CTT	GAT	TCA	ACT	CAI	AGA	GAT	CTG	CTT	TCT	TCT	GCC	TCT	CAA	GTC	TGA	AGA	TAG	AGA	TAG	AGA	TAG	AGA	CTT	
9205	AGA	TAG	TGA	TCC	CAA	GTT	TTA	GCA	AAA	GTT	TCT	AGA	CTT	GAC	ATF	AAI	QSA	TGG	AGA	TAG	ACA	TGA	ATF	ACA	AGA	
9283	ACT	AAT	GTC	GAT	TCA	ATC	ATC	TGA	ATC	ATA	CTC	TAT	ACT	TAT	ACT	TAT	ACT	TAT	ACT	TAT	ACT	TAT	ACT	TAT	CTT	
9361	TAG	AGG	CAC	CAT	TCA	AUG	GCA	GTG	TTT	GCC	ATC	ATG	CAT	AGG	CTT	AGT	CTT	CAG	TGG	TGA	AAG	GCA	TAT	GGG	GCA	ATA
9439	TTA	CTC	ATT	ATA	CAG	ATG	AGA	AAC	TGG	AAA	AGA	CTT	GCC	TCA	GAT	TCT	CTA	CTG	AAA	GGC	TGA	GTT	TGT	GGC	TTC	TGG
9517	AAA	ATC	TTT	TAC	TTT	CAA	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	TAT	
9595	AAA	AAA	TAA	ATG	AAA	CAA	TAA	ACC	AAA	TAC	ATC	GAC	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	
9673	AAA	GAA	AGA	AAA	AGT	CTT	TGA	TAA	GAT	TCA	ACA	TTC	ATT	CTT	TTT	TTA	TTA	GAT	ATT	TTC	TTC	ATT	TAC	ATT	TCA	AAT
9761	GCT	ATC	CCC	AAA	GCC	CCC	TAT	ACC	TTC	CCC	TGC	GCT	GCT	CCC	CAA	CCC	ACC	CAC	TCC	TGC	TTT	CTG	GCC	CTG	GCA	TTC
9829	CTC	TGT	ACT	GAG	GCA	TAT	GAT	CTT	GAT	CTT	GAT	CTT	GAT	CTT	GAT	CTT	GAT	CTT	GAT	CTT	GAT	CTT	GAT	CTT	TTT	
9897	GCT	ACA	TAT	GCA	ACT	AGA	GAC	ACA	GCT	CTG	GGG	GTT	ACT	GGT	TAG	TTC	ATA	TTG	TTA	CTC	CTC	CTA	TAG	AGT		

Figure 12 contd

11857 AAA TGC AAA AAT CCT CAA CCT AAG ACA TAG CAG TGA AAC ATT GAT GAC CAA ATA GGA AAT CCA TGT AGA GAC CTT CTA
11935 TCT TCT GAT GGC TCC ACA GGC ACC ATC ATT GAT GAT GAT GAT GAT GAT GAT GAT GAT GAT GAT GAT GAT GAT GAT GAT GAT
12013 CTG CCA TGG ATG ATG TCA TGC ATG TCA TGC AAT CAA TTA AGT CCA ACT TGG CCA GAA GAA GAA GAA GAA GAA GAA GAA
12091 AGG GAA TAA ATG TCA TGC ATG TCA TGC AAT CAA TTA AGT CCA ACT TGG CCA GAA GAA GAA GAA GAA GAA GAA GAA
12169 AAT GAT GAT CTT TCA CTA GAT CTT TCA CTA GAT CTT TCA CTA GAT CTT TCA CTA GAT CTT TCA CTA GAT CTT TCA CTA
12247 AAG ACT TGG AAA TCA TGA ATG TCA TGA ATG TCA TGA ATG TCA TGA ATG TCA TGA ATG TCA TGA ATG TCA TGA ATG TCA
12325 ATC CCA TCG CTA GGA AGA CTG AGG CAG GAA GTC CCA GCT TAG GCT CCA GCT TAG GCT CCA GCT TAG GCT CCA GCT TAG
12403 AAT AAT TAC TAA CTA CTT AAT AAG AGA TTG GAT GAT AAG AAT TAA TTA TCA GGC AAC ATC TTT CAT TTT CAT TTT CAT
12481 TAT TTT CTA CTT GAT ATG TTT TAA AAT GCA GTA AGG ATC TAA TTA TCA GGC AAC ATC TTT CAT TTT CAT TTT CAT
12559 GCA ACA ACA GAG AGT GAT AGA TTT GAT TGG AAA AAA ATA TTA TCA GGC AAC ATC TTT CAT TTT CAT TTT CAT
12637 AGT ACC CAC CCA TAT CTC CCC ACC CAT CCC CCA TAC CAG ACT GGT TAT TGA TTT TCA TCG TGA CCG TCG TCG TCG TCG
12715 TAA AAA AAG TAA TGC TAC CTT ATT GGG AGT GTC CCA TGG ACC AAG ATA GCA ACT GTC ATC GCT ACC GTC ACA CTG CTT
12793 TGA TCA AGA AGA CCC TTT GAG GAA CTG AAA ACA GAA CCT TAG GCA CAT CTG TTG CTT TCG CTC CCA TCC TCC TCC AAC
12871 AGC CTG GGT GGT GCA CTC CAC ACC CTT TCA AGT TTC CAA AGC CTC ATC CAC CTG CTC COT ACC CCA GCA CCA COT GGC CAA
12949 GGC TGT ATC CAG CAC TGG GAT GAA AAT GAT ACC CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA CCA
13027 AGT CCC CAG TCC CAA TGC TTT TGC ACA GTC AAA ACT CAA CTT GGA ATA ATC AGT ATC CTT GAA GAG TTT TGA TAT GGT
13105 CAC TGG GCC CAT ATA CCA TGT TGT AAG ACA TGT GGA AAA GAT GAT TCA TGG GGC CCA GAC ACH TTC TAG AAG TAC CTG AGA
13183 GTG GCA AAA AAT AGT TGT GCT AAA TAG TTT GGC CAT CTT TAG GCT GAG ABA CTA GGA AAT ACA GCG AAG GAC TAT ATC
13261 AGC ATT GCA GGA TAG TTG TCA GTA ABC ACC CCA CAA CCC ATA ACA GAA GTA TTC TCT TCT TTT TTT TTT TTT TTT
13339 TCC ATG TAG ATG GCT GTC TTC ATA TTT GTT CTA GAC GGC GGG CC

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1 GCG GCC GCA ATA AAA TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT TAT
79 TCC ATC AAA ACA AAA GGA AAC AAA ACA AAC TAG CAA AAT AAG CTG TCC CCA GTG CAA GTG CAG GTG CCA GAA CAT TTC
157 TCT ATC GAA GGA TCT GCG ATC GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG
335 GGG GAG GGG TCG GCA ATT GAA CCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG GCG
333 TCC GCC TTT TTC CCG CCG GAG GAG AAC CGT ATA TAA TAA TAA TAA TAA TAA TAA TAA TAA TAA TAA TAA TAA TAA TAA
391 TTG CCG CCA GAA CAC AGC TGA AGC TTC GAG GGG CTC GCA TCT CTC CTT CAC GCG CCG GCG CCG CCG CCG CCG CCG CCG
469 ATC CAC GCC GGT TGA GTC GCG TTT GTC GCG GCG TCC CTT GGA GCG TAC CTA GAC TCA GCG GCG TCT CCA CCG TCT AAG TAA GTT
547 TAA AGC TCA GGT CBA GAC GCG GCG TTT GTC GCG GCG TCC CTT GGA GCG TAC CTA GAC TCA GCG GCG TCT CCA CCG TCT AAG
725 GCC TGA CCC TGC TTG CTC AAC TCT ACG TCT TTG TTT GGT TTT GGT TTT GGT TTT GGT TTT GGT TTT GGT TTT GGT TTT
781 TCT GGC TCC GAG GTA AGG ATG GAG AAC ACT AGG AAT TTA CTC AGC CAG TGT GCT CAG TAC TGA CTG GAA CTT CAG GGA
859 AGT TCT CTG ATA ACA TGA TTA ATA GTA AGA ATA TTT GTT TTT ATG TTT CCA ATC TCA GGT GCC AGA TGT GAC ATC CAG
937 ATG ACC CAG AGC CCC AGC AGC CTG AGC GCG AGC GAG GAG GAG GAG GAG GAG GAG GAG GAG GAG GAG GAG GAG GAG GAG
1015 AGC AGC TAC CTG AAC TGG TAT CAG CAG AAG CCC GGC AAG GCG CCC CAG CTG ATC TAC GCG GCG AGC TCC CTG CAG
1093 ASC GGC GTC CCC AGC AGA TTC AGC GGC AGC GGC TCC GGC ACC GAC TTC ACC CTG ACC ATC AGC AGC CTG CAG CCC CAG
1171 GAC TTC GCC ACC TAC TAC TGC CAC CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG
1249 AGA GCC GAC GCC GCT CCC ACC CTG TCC ATC TTT CCC ACC AGC ATG GAA CAG CTG ACC TCT GCG GGA GCC ACC GTC GTC
1327 TGC TTC GTG AAC AAC TTC TAC CCC AGA GAC ATC AGC TGG AAG TGG AAG TGG AAG TGG AAG TGG AAG TGG AAG TGG AAG
1405 CTG GAC AGC GTG ACC CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG CAG
1483 AAC GAG TGT TGA GCT AGC TGG CCA GAC ATG ATA GGA TAC AAT GAT GAG TCC AGC TCC AGC TCC AGC TCC AGC TCC AGC
1561 AAA AAA TGC TTT ATT TGT GAA ATT TGT GAT GCT TTA TTT GTA ACC ATT ATA AGC TGC AAT AAA CAA GTT AAC
1639 AAC AAC AAT TGC ATT CAT TTT ATG TTT CAG TAT GAG GAG GTG TGG GAG GTT TTT TAA AGC AAG TAA AAC CTC TAC
1717 AAA TGT GGT ATG GAA TTC TGA AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT AAT
1795 GAG GGA TGA ATA AGG CAT AGG CAT CAG GGG CTG TTG CCA ATG TGC ATT AGC TGT TTG CAG CCT CAC CTT CTT TCA TGG
1873

Figure 12 contd

1951 AGT TTA AGA TAT AGT ATA TTT TCC CAA GGT TTG AAC TAG CTC TTC ATT TCT TTA TGT TTT AAA TGC ACT GAC CTC CCA
2039 CAT TCC CTT TTT AGT AAA ATA TTT CCA ATA TTA TTA TTA TTA TTA TTA TTA TTA TTA TTA TTA TTA TTA TTA TTA TTA
2107 AAT CCA GAT GCT CAA GGC CTT TCA TAA TAT CCC CCA GGT TAG TTA GGC AAA TAA TAA TAA TAA TAA TAA TAA TAA TAA
2185 AAT TGG ACA GCA AGA AGA GCA GCT TCT AGC GAA TTC TCG ACT CAT TCC TTT GGC CCA GCA GCA GCA GCA GCA GCA
2263 TTT CCA CTA TCG GCG AGT ACT TCT ACA CAG CCA TCG GTC CAG AGC GGC GGT CTT CTT CCG GCG ATT TGT GTA GCG CCG
2341 ACA GTC CCG GCT CCG GAT CCG AGT CCG CCA TAT CCA TCG AAA TTT CCG TCA ACC
2419 AAG CTC TGA TAG AGT TGG TCA AGA CCA ATG CCG AGC ATA TAC CCG AGC GGC GAT CTT GCA AGC TCC GGA TGC
2497 CTC GTC TCG AAG TAG GGC GTC TGC TGC TCA CAA GGC AAC CAC GGC CTC CAG AAG AAT TTT TTT GGC ACC TCG TAT
2575 TGG GAA TCC CCG AAC ATC GGC TCG CTC CAG TCA ATG ACC GCT GGT ATG GGC CCA TTT TCC GTC AGC ACA TTT TTT GAG
2653 CCG AAA TCC CCG TGC AGC AGG TGC CCG ACT TCG GGC CAG TCC TCG GGC CCA AGC ATA TCG AGC GCA TCC TCG GCG
2731 ACG GAG GCA CTC ACG GTC TCG TCC ATG ACA GAT TCT TCG CAG TGA TAC ACA TGG GGA TCA GCA ATC GCG CAT ATG AAA TCA
2809 CCG CAT GTA GTC TAT TGA CCG ATT CTT TCG GGT CCG AAT GGC CCG AAC CCG CTC GTC TCG CTA AGA TCG GCC GCA GCG
2887 ATC GCA TCC ATG AGC TCC GCG ACG GGT TGC AGA ACA GCG GGC AGT TCG GGT TCA GGC AAG TCT TGC AAC ATC GGC AGC GCG
2965 TGT GCA CCG GCG GAG ATG CAA TAG GTC AGG CTC TCG CAG AAT TCC CCA ATG TCA AAC ACT TCC GCA ATC GGC AGC GCG
3043 GCC GAT GCA AAG TGC CCA TAA ACA TAA CCA TCT TTG TAG AAA CCA TCG GCG CAG CTA TTT ACC CCG AGC ACA TAT CCA
3121 CCG CTT CTT ACA TCG AAG CTG AAA GCA GAT TCT TCG CCG TCC TCG GAG AGC TGC ATC AGG TCG GAG ACG CTG TCG AAC
3199 TTT TCG ATC AGA AAC TTC TCG ACA GAC GTC GCG GTG AGT TCA GGC TTT TTC ATG ATG GGC CTC CTA TAG TGA GTC GTA
3277 TTA TAC TAT GCC GAT ATA CTA TGC CCA TGA TTA ATT GTC AAA ACA GCG TGG ATG GCG TCT CCA GCT TAT CTG ACG GTT
3355 CAC TAA ACG AGC TCT GCT TAT ATA GAC CTC CCA CCG TAC ACG CCA ACT CCG CAT TTT CBT CAA TGG GGC GGA GTT GTT
3433 ACG ACA TTT TGG AAA GTC CCG TTG ATT TAC TAG TCA AAA CCA CCA ACT CCG CAG CTA TTT ACC CCG AGC ACA TAT CCA
3511 TCC CCG TGA GTC AAA CCG CTA TCC ACG CCG ATT GAT GTA CTG CCA AAA CCG CAT CAT GGT AAT AGC GAT GAC TAA
3589 TAC GTA GAT GTA CTG CCA AGT AGG AAA GTC CCA TAA GGT CAT GTA CTG GGC ATA AGC CCA GCG GGC AGT TTA CCG TAA ATA CTC
3667 ATT GAC GTC AAT AGG GCG GGT ACT TGG CCA TAT TGG CBT TAC TAT GGC AAC ADA CBT CAT TTA TCA CBT CAA TGG GCG AGG
3745 CAC CCA TTG ACG TCA ATG GAA AST CCC TAT TGG CBT TAC TAT GGC AAC ADA CBT CAT TTA TCA CBT CAA TGG GCG AGG
3823 GTC GTT GGG CCG TCA GCC AGG CCG GCT ATT TAC CBT AAG TTA TGT AAT GGC AGT TTA ATT AAG AAC ATG TGA GCA
3901 AAA GGC CAG CAA AAG GCC AGG AAC GGT AAA AAG GCC CCG TTG CTG GCG TTT TTC CAT ACG CTC CCG CCG CCG CCG CCG
3979 CAT CAC AAA ANT CGA CCG TCA AGT CAG AGG TGG CCA AAC CCG ACA GGA CTA TAA TAA TAA TAA TAA TAA TAA TAA
4057 AGC TCC CTC GTG CCG TCT CTT CCG ACC CTC CCG CTT ACC GGA TAC CTG TCC GCG TTT CTC CCG TCG GGA AGC GTG
4135 CCG CCG GTT CAG CCG GAC CCG TGC GGT TTA TCC GGT AAC TAT CCG AGT TCG GTG TAG GTC GGT CCG TCC AAG CCG GGC TGT GTC CAC GAA
4213 CCA CTG GCA GCA GCC ACT GGT AAC AGG ATT AGC AGA GCG AGG TAT CTC AGT TCG GTG TAG GTC GGT CCG TCC AAG CCG GGC TGT GTC CAC GAA
4291 CCT AAC TAC GGC TAC ACT AGA AGA ACA GTA TTT GGT ATC TGC GCT CTC AGC CCA GAT GGC GGT ACT AAG TTT TGG TGG
4369 GGT AGC TCT TGA TCC GGC AAA CAA ACC ACC GCT GGT AGC GGT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT TTT
4447 AAA ARA GGA TCT CAA GAA GAT CCT TIG ATC TTT TCT ACG GCG TCT GAC GCT CAG TGG AAC GAA AAC TCA CBT TAA GCG
4525 ATT TTG GTC ATG GCT AGT TAA TTA ACA TTT AAA TCA
4603

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1 GCG GCC GCA ATA AAA TAT CTT TAT TTT CAT TAG ATC TGT GUG TTG GTT TTT TGT GTG AAT CBT AAC TBA CAT ACG CTC
79 TCC ATC AAA ACA AAA CAA AAC AAA ACA AAC TAG CAA AAT AGG CTG TCC CCA GTG CAA GTG CAG CCA GAA CAT TTC
157 TCT ATC GAA GGA TCT CCG ATC GCT CCG GTG CCG GTC AGT AGG CAG AGC GCA CAT CCG CCA CAG TCC CCG AGA AGT TGG
235 GGG GAG GGG TCG GCA ATT GAA CCG GTG CTT AGA GAA GGT GGC GCG GCG TAA ACT GGG AAA GTG ATG TCG TGT ACT GGC
313 TCC GCC TTT TTC CCG AGG GTG GGG GAG AAC CBT ATA TTA GTG CAG TAG TCG CCG TAA CCG TTT TTC GCA ACG GGT
391 TTG CCG CCA GAA CAC AGC TGA AGC TTC GAG GGG CTC GCA TCT CTC CTT CAC GCG CCG GCG CTA CTT GAG GCG GCG
469 ATC CAC GCC GGT TGA GTC GCG TTC TGC CCG CTC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
547 TAA AGC TCA GGT CGA GAC GCG CCG TTT GTC CCG CCG TCC CTT GGA GCG TAC CTA GAC TCA GCG GCG TCT CCA CCG TTT
625 GCC TGA CCC TGC TTG CTC AAC TCT ACG TCT TTG TTT CCG TTC TGC GCG GGT ACA GAT CCA AGC TGT GAC CCG
703 CCG CTA CCT GAG ATC ACC GCG GTG TCG ACG CCA TGG ACA TGA GAG TGC GCG CCG AGC TCC TGG GGC TCC TGC TAC

Figure 12 cont'd

791 TCT GGC TCC GAG GTA AGG ATG GAG AAC ACT AGS AAT TTA CTC AGC CAG TGT GCT CAG TAC TGA CTG GAA CTT CAG GGA
 859 AGT TCT CTG ATA ACA TGA TTA ATA GGA ATG TTT TTT ATG TTT CCA ATC TCA GGT GGC AGA TGT GAT ACC AGC AGC GAC GTG
 937 CTG ACC CAG CCC GAC TAC TGT TCC TGG TAT CAG CAC CCG GGC AGC AAG GCC CCG AAG CTG AIG ATG ATC TAC GAG GTG TCC AAC
 1035 GGC GGC TAC AAC TAC GAG TCC TCC TGG TAT CAG CAC CCG GGC AGC AAG GCC CCG AAG CTG AIG ATG ATC TAC GAG GTG TCC AAC
 1093 AGA CCC AGC GGC GTG AGC AAC AGA TTC AGC GGC AGC AAC ACC GCC AGC CTG ACC ATC GGC GGC GGC AGA AAC CTG
 1171 GCT GAG GAC GAG GCC GAC TAC TAC TGC AGC AGC TAC ACC AGC AGC TCC ACC CTG GTG TTT GGC GGC GGC AGA AAC CTG
 1243 ACC GTG CTG AGA GCC GAC GCC GCT CCC ACC ACT TTT CCG GGC AGC GTG AAG TGG AAG ATC GAC GGC AGC GAG GAG AGG
 1327 ACC GTG GTG TGC TGC GTG AAC AAC TCT TAC CCG AGA GAC ATC CCG GTG AAG TGG AAG ATC GAC GGC AGC GAG GAG AGG
 1405 GAC GGC GTG CTG GAC AGC GTG ACC GAC CAG GAC AGC AAG GAC TCC ACC TAC AGC ATG AGC ACC CTG AGC CTG ACC
 1483 AAG GTG GAG TAC GAG AGG CAC AAC CTG TAC ACC TGC GAG GTG GTC CAC AAG ACC AGC TCC AGC GTC GTG AAG TCC
 1561 TTC AAC CCG AAC GAG TGT TGA GCT AGC TGG CCA GAC ATG ATA AGA TAC ATT GAT GAG TTT GGA CAA ACC ACA ACT AGA
 937 CTG ACT CAG CCT GCC TCC GTG TCT GGG TCT CCT GGA CAG TCG ATC ACC ATC TCC TGC ACT GGA ACC AGC AGT GAC GTT
 1615 GGT GGT TAT ABC TAT GTC TCC TGG TAC CAA CAG CAC CCA GGC AAA GGC CCC AAA CTC ATG ATT TAT GAG GTC AAT AAT
 1693 CCG CCC TCA GGG GTT AAT GGC TTT TCT GGC TCC AAG TCT GGC AAC ACG ACG TCC CTC AGT ATC TCT GGG CTC CAG
 1371 GCT GAG GAC GAG GCT GAT TAT TAC TGC AGC TCA TAT ACA AGC AGC ACT CTC GTA TTC GGC GGA GGC ACC AAG CTG
 1249 ACC GTG CTA GGG GCT GAT GCT GCA CCA ACT GTA TCC ATC TTC CCA CCA TCC ATG TGG AAG AAT GAT GGC AAG CAA
 1327 ACA GTG GTG TGC TTC GTG AAC AAC TTC TAT CCC AGA GAC AAT AGT GTC AAG TGG AAG AAT GAT GGC AAG CAA CAA
 1405 GAT GGT GTG CTG GAC AGT GTT ACT GAT CAG GAC AGC AAG GAC AAT GTC AAT AAG ACA TCA TCC TCA CCG GTC AAG AGC
 1483 AAG GTT GAA TAT GAA AGG CAT AAC CTC TAT ACC TGT GAG GTT GTT CAT AAG ACA TCA TCC TCA CCG GTC AAG AGC
 1561 TTC AAC AGG AAT GAG TGT TAG GCT AGC TGG CCA GAC ATG ATA AGA TAC ATT GAT GAG TTT GGA CAA ACC ACA ACT AGA
 1639 ATG CAG TGA AAA TGC TTT ATT TGT GAA ATT TGT GAT GCT ATT GAT GAG TTT GGA CAA ACC ACA ACT AGA
 1717 CAA GTT AAC AAC AAC AAT TGC ATT CAT TTT ATG TTT CAG GGT CAG GGG GAG GTG TGG GAG GTT ATT TAA AGC AAG TAA
 1795 AAC CTC TAC AAA TGT GGT ATG GAA TTC TAA AAT ACA GCA TAG CAA AAC TTT AAC CTC CAA ATC AAG CCT CTA CTT GAA
 1873 TCC TTT TCT GAG GGA TGA ATA AGG CAT AGS CAT CAG GGG CTG TTG CCA ATG TGC AAT TCA TTA TTT GAT GAG GTT TTA
 1951 CTT TCA TGG AGT GTA AGA TAT AGT GTA TTT TCC CAA GGT TTG CAG TAG CTC ATT TCT TTA TGT TTT AAA TGC ACT
 2029 GAC CTC CCA CAT TCC CTT TTT AAT AAA ATA TTC AGA AAT AAT TTA AAT ACA TCA TTG CAA TGA GGG AAC AAA GGA ACC
 2107 AAT AGG CAG AAT CCA GAT GCT CAA GGC CCT TCA TAA TAT CCC CCA GTT TAG TAG TTG GAC TTA GGA CAA TAA ATG TTT TTT
 2185 TTT AAT AGA AAT TGG ACA GCA AGA AAG CCA GCT TCT AGC GAA TTC TCG ACT CAT TCC TTT GCC CTC GGA CAA GTG CTG
 2263 GGA GGT CCG TTT CCA CTA TCG GCG AGT ACT TCT ACA CAG CCA TCG GTC CAG ACC GCG CTT CTG CCG GCG AAT TGT
 2341 GTA GGC CCG ACA GTC CCG GCT CCG GAT CCG ACG AAT GCG TCG CAT CGA CCC TGC GGC CAA GCT GCA TCA TCG AAA TTG
 2419 CCG TCA ACC AAG CTC TGA TAG AGT TGG TCA AGA CUA ATG CCG AGC ATA TAC GCC CCG AGC CCG GGC CAT CCT GCA AGC
 2497 TCC GGA TCC CTC GGC TCG AAG TAG CCG GTC TGC TCC ATA CAA GCC AAC CAC GGC CTC CAG AAG AAG ATG TTG GCG
 2575 ACC TCG TAT TGG GAA TCC CCG AAC ATC GCC CTC CAG TCA ATG ACC GCT GTT ATG CCG CCA TTG TCC GTC AGG ACA
 2653 TTG TTG GAG CCG AAA TCC CCG TGC ACG AGG TGC CCG ACT TCG GGG CAG TCC TCG GCC CBA AGC ATC AGC TCA TCG AGA
 2731 GGC TGC GCG ACG GAC CCA CTG ACG GTG TCG TCC ATC ACA GTT TGC CAG TGA TAC ACA TGG GGA TCA GCA ATC GCG CAT
 2809 ATG AAA TCA CCG CAT GTA GTG TAT TGA CCG AAT CTT TSC GGT CCG AAT GGG CCG AAC CCG CTC GTC TTG CTA AGA TCG
 2887 GCT GCA GCG ATC GCA TCC ATG AGC TCC CCG AGC GGT TGC AGA ACA GCG GGC AGT TCC ATG TCA AGC AGT TCC TCG AAC
 2965 GTG ACA CCC TGT GCA CCG CCG GAG ATG CAA TAG GTC AGC CTC TCG CTG AAT TCC CCA ATG TCG AGC ATC
 3043 GGG AGC GCG GCC GAT GCA AAG TGC CCG TAA ACA TAA CBA TCT TTG TAG AAA CCA TCG GCG CAG CTA TTT ACC CCG AGG
 3121 ACA TAT CCA CCG CCT CCT ACA TCG AAG CTG AAA GCA CGB GAT TCT TCG CCG TCC GCG AGC ATC AGG TCG GAG AGG
 3199 CTG TCG AAC TTT TCG ATC AGA AAC TTC TCG ACA GAC GTG AGT TCA GGC TTT TTT ATG ATG GGC CTC CTA TAG
 3277 TGA GTG GTA TTA TAC TAT GCT GAT ATA CTA TGC CAG TGA TTA ATG AAA ACA GCG TGG ATG GGC TCT CCA GCT TAT
 3355 CTG ACG GTT CAC TAA ACG AGC TCT TAT ATA GAC CAT CCA CCG TAC ACG COT ACC GGC CAT TTG CGT CAA TGG GGC
 3433 GGA GTT GTT ACG ACA TTT TCG AAA GTC TTG ATT TAC TAG TCA AAA CAA ACT CCC ATT GAC GTG AAT GGG GTG GAG
 3511 ACT TGG AAA TCC CCG TGA GTC AAA CCG CTA TCC ACG CCC ATT GTT GTA CTG CCA AAA CCG CAT CAT GGT AAT AGC
 3589 GAT GAC TAA TAC GTA GAT GTA CTG CCA AGT AGG AAA GTC CCA TAA GGT CAT GTA CTG GGC ATA ATG CCA GGC GCG CCA
 3667 TTT ACC GTC ATT GAC GTG AAT AGG GGG CBT ACT TGG CAT ATG ATA CAG TTG ATG TAC TGC CAA GTG GGT AGT TTA CCG
 3745 TAA ATA CTC CAC CCA TTG ACG TCA ATG GAA AGT CCC TAT TGG CBT TAC TAT GGG AAC ATA CBT CAT TAT TGA CBT CAA

Figure 12 contd

3622 TGG GCG GGG GTC GPT GGG CCG TCA GCG AGG CCG GGC AAT TAC CGT AAG TTA TGT AAC GCC TGC AGG TTA ATT AAG AAC
 3661 ATG TGA GCA AAA GGC CAG CAA MAG GCC AGG BAC CGT AAA AAG GCC GCG TTG CTG GCG TTT TTC CAT AGG CTC GCG CCC
 3979 CCF GAC GAG CAT CAC AAA AAT CGA TCC CTA AGT CAG AGG TGG CCA AAC CCG ACA GGA CTA TAA AGA TAC CAG GCG TTT
 4057 CCC CCF GGA AGC TCC CTC GCG CCG TCT GGT CCG ACC CTG CCG CTT ACC GGA TAC CCG TTT CTC CTT CTC CCG TCG
 4135 GGA AGC GTG GCG CTT TCT CAT AGC TCA CCG TGT AGG TBT CTC AGT TCG GTG TAG GTC GGT CCG TCC AAC CCG GTA AGA CAC
 4213 GTG CAC GAA CCC CCG GTT CAG CCG GAC TGC TGC TTA TCC GGT AAC TAT CBT CIT GAG TCC AAC CCG GGT ACA GAG TTC TTG
 4291 GAC TTA TCS CCA CTC GCA GCA GCC ACT GGT BAC AGG ATT AGC GGA GGG AGG TAT GTA GGC GGT GCT ACA GAG TTC TTG
 4369 AAG TGG TGG CCT AAC TAC GGC TAC ACT AGA AGA GGA GAT GAT GAT ATT GGT AIC TSC GCT CTG CTG AAG CCA GTT ACC TTC GGA
 4447 AAA AGA GTT GGT AGC TCT TGA TCC GGC AAA CAA ACC GCT AGC GGT GGT TTT TTT GGT TGC AAG CAG CAG AAT
 4525 ACG CCG AGA AAA AAG GGA TCT CAA GAA GAT CCT TTG AIC TTT TCT ACG GGG TCT GAC GCT CAG TGG AAC GAA AAC TCA
 4603 CGT TAA GGG AAT TTG GTC ATG GCT ACT TAA TTA ACA TTT AAA TCA

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1 CTT GAT TTG GGT GAT GGT TCA CGT AGT GGG CCA TCG CCC TGA TAG ACG GTT TTT CCG CCT TTG ACG TTG GAG TCC ACG
 79 TTC TTT AAT AGT GGA CTC TTG TTC CAA ACT GGA ACA ACA CTC AAC TCT ATC TCG GGC TAT TCT TTT GAT TTA TAA GGG
 157 ATT TTG CCG AAT TCG GTC PAT TGS TTA AAA AAT BAC CTG AAT TAA CAA AAA TTT AAC GCG AAT TTT AAC AAA ATA TTA
 235 ACG TTT ACA AAT TTA TGG TGC AGT CTC AGT ACA ATC TCG TCT GAT GCC GCA TAG TTA AGC CAG CCC CGA CAC CCG CCA
 313 ACA CCC GCT GAC GCG CCC TGA CCG GCT TGT TGT CTC CCG AAA CCG GAG ACA GGA GGC CTC GTG ATA CCG CTA TTT TTA TAG
 391 TGC ATG TGT CAG AGG TTT TCA CCG TCA TCA CCG AAA CCG GAG ACA GGA CAA TAG TAA TAA TAT TGA AAA
 459 GAT AAT GTC ATG ATA ATA ATG GAT TCT TAT ACG TCA GGT GGC ACT TTT CCG GCA AAT GTG CCG GGA ACC CTT ATT TGT
 517 TTA TTT TTC TAA ATA CAT TCA AAT AAT CCG CTC ATG AGA CAA TAA CCC TGA TAA ATG CTT CAA TAA TAT TGA AAA
 625 AAG AAG AGT ATG AGT AAT CAA CAT TTC CGT GTC CCC CTT ATT CCC TTT TTT CCG GCT TTT TGC CTT GGT TTT GCT
 703 CAC CCA GAA ACG CTG GTG AAA GTA AAA GAT GGT GAA GAT CAG TGT GCC GGT TAC ATC GAA CTG GAT CTC
 859 GGC GCG GTA TTA TCC CGT APT GAC GGC GGS CAA GAG CAA CTC ATG ACA GTA AGA GAA TTA TGC AGT GGT GCU AAT ACC ATG
 917 GAG TAC TCA CCA GTC ACA GAA AAG CAT CTT ACG GAT GGC ATG ACA GTA AGA GAA TTA TGC AGT GGT GCU AAT ACC ATG
 1015 AGT GAT AAT AAC ACT CCG GCC AAC TTA CTT CTG ACA ACG ATC GGA GGA CCG AAG CAG CTA ACC GCT TTT TTT CAC AAC ATG
 1093 GGG GAT CAT GTA ACT CCG CTT GAT CGT TGG GAA CCG GAG CTA ACT GAC GAA CTA CTT ACT CTA GCT TCC CCG CAA CAA TTA
 1171 ATG CCT GTA GCA ATG GCA ACA ACG TTG CCG AAA CTA TTA ACT GAC TCG GCG CTT CTG CCG TCG GCG CTT ATT GCT GAT
 1249 ATA GAC TGG ATG GAG GCG GAT AAA GTT GCA GGA CCA CTT CTG CCG TCG GCG CTA GNT GGT AAG CCC TCC CCG TCA CTG ATT
 1317 AAA TCT GGA GCC GGT GAG CGT GGS TCT CCG GGT ATC ATT GCA GCA CTC GAG CTA GAT GGT AAG CCG TCG TCA CTG ATT
 1405 GAT ATC TAC ACG ACG GGS AGT CAG GCA ACT ATG GAT GAA CAA AAT AGA CAG ATC GCT GAG ATA GGT GAT GGT TCA CTG ATT
 1483 AAG CAT TGG TAA CTG TCA GAC CAA GTT TAC TCA TAT ATA CTT TAG ATT GAT TTA AAA CTT CAT TTT TAA TTT AAA AGG
 1561 ATC TAG GTG AAG ATC CTT TTT GAT AAT CTC ATG ACC AAT ATC CCT TAA CGT GAT TTT TCG TCG CAC TGA GCG TCA GAC
 1639 CCC GTA GAA AAG ATC AAA GGA TCT TCT TGA GAT CTT TTT CTG CCG GAT ATC TGC TCG CAA ACA AAA CCA
 1717 CCG CTA CCA GCG GTG GTT TGT TTG CCG GAT CAA GAG CTA CTA ACT CTT TTT CCG AAG GTA ACT GGC TTC AGC AGA GCG
 1795 CAG ATA CCA AAT ACT GTT CTT CTA GTG TAG CCG TAG TTA GAG CAC CAC TTC AAG AAC TCT GTA GCA CCG CCT ACA TAC
 1873 CTC GCT CTG CTA ATC CTG TTA CCA GTG GCT GCT GCC AGT GGC GAT AGT TCG TGT TTT ACC GCG TTG GAG CCA AGC TAC
 1951 TGG TTA CCG GAT AAG CCG CAG CCG TCG TGA AGC GGT TCG TGC ATA CAG CCC AGC TTG GAG CCA AGC ACC TAC
 2029 ACC GAA CTG AGA TAC CTA CAG CGT GAG CTA GGA AAG CCG CCG CTT CCC GAG AGA AAG CCG GAC AGG TAT CCG
 2107 GTA AGC GGC AGG GTC GGA ACA GGA GAG CCG ACG AGG GAG CTT CCA GCG GGA AGC CCG TGG TAT TAT AGT CCT GTC
 2185 GGG TTT CCG CAC CTC TCA CTT GAG CGT TTT TGG TGA TGT TGT CAC ATG TTC TTT CCG TTA TCT CTT GAT TCT
 2263 AAC CCG GCT TTT TTA CCG TTC CTG GCC TTT TGG TGG CCG TTT TGT CAC ATG TTC TCG TGA GCG CTA TGG AAA AAC GCU AGC
 2341 GTG GAT AAC CGT ATT ACC GCC TTT GAG TGA GCT GAT ACC GCT CCG AGC CAG ACC GAG CCG AGC GAG TCA GTG
 2419 AGC GAG GAA GCG GAA GAG CCG CCA ATA CCG CCG CTT CCG CCG CCG ATT CAT TAA TCG AGC TGG CAC
 2497 GAC AGG TTT CCG GAC TGG AAA CCG GGC AGT GAG GCA ATT AAT GTG AGT TAG CTC ACT CAT TAG GCA CCC CAG
 2575 GCT TTA CAC TTT ATG CTT CCG GCT CGT ANG TTG TGT GGA ATT GTG AGC GGA TAA CAA TTT CAC ACA GGA AAC AGC TAT

Figure 12 contd

2653 GAC CAT GAT TAC GCC AAG CTT TGG AGC CTT TTT TTT GGA GAT TTT CAA GGT GAA AAA ATT ATN ATT CCG AAT TCC TTT
 2731 AGT TGT TCC TTT CTA TTC TCA CRG TGC ACA GAT CAA AAT GAC CCA GTC TCC ATC CTT GTC TGC ATC TGT AGG AGA
 2809 CAG AGT CAC CAT CAC TTG CCG GGC AAG TCA CAG CAT TAG CAG TCA GAA ACC ACG GAA ACC ACG GAA AGC
 2887 CCC TAA GCT CTT GAT CTA TGC TGC ATC CAG TTT GCA AAG TGG GGT CCC ATC AAG GTT CAG TGG ATC TGG GAC
 2965 AGA TTT CAC TCT CAC CAT CAG CAG TCT GCA ACC TGA AGA TTT TGC AAC TTA CTA CTG TCA ACA GAG TTA CAG TAC TCC
 3043 TCC AAC GTT CCG CCA AGG CAC CAA GCT CCA CAG TAC TAC TGT GGC TGC ACC ATC TGT CTT CAT CTT CCG GGC ATC
 3121 TGA TGA GCA GTT GAA ATC TGG AAC TGC CTC TGT TGT TGT GGT GGT GAA TAA CTT CTA TCC CAG AGA GGC CAA AGT ACA
 3199 GTG GAA GGT GGA TAA CCG CTT CCA ATC GGC TAA CTT CCA GGA GAG TGT GAA TAA CTT CTA TCC CAG AGA GGC CAA AGT ACA
 3277 CAG CTT CAG CAG CAC CTT GAC GCT GAC CAA AGC AGA CTA CCA GAA ACA CAA AGT CTA CCG CTG CCA AGT CAC CCA TCA
 3355 GGG CTT GAG CTC GCC GGT CAC AAA GAG CTT CAA CAG GGG AGA GTG TTA GTA AGG CCG GGC AAT TCT AAT TCA AGG AGA
 3433 CAG TCA TAA TGA AAT ACC TAT TGC CTA CCG CAG CCG GTG GAT TGT TAT TAC TGG CCG CCG AGC CCA TGG CCA TGC
 3511 CTG CTT GCC GAA TAT CAT GGT GGA AAA TGG CCG CTT TTT TGG ATG CAT CCA CTG TGG CCG GGT GGC TGT GGC GCA CCG
 3589 CTA TCA GGA CAT AGC GTT GGC TAC CCG TGA TAT TGC TGA AGA GCT TGG CCG CCA ATG GGC TGA CCG CTT CTT GGT GCT
 3657 TTA CCG TAT CCG CCG TCC CCA TTC GCA GCG CAT CCG CTT CTA TCG CTT TCT TGA CCA GTT CTT CTG AGC GCG ACT CTG
 3735 GGG TTC GGT GCT ACG AGA TTT CCA TTC CAC CCG CCG CTT CTA TGA AGG GTT GGG AAT CGT TTT CCG GCA CCG
 3823 CCG CTG GAT GAT CTT CCA CCG CCG GGA TCT CAT GGT GGA GTT CTT CCG CCA CTT GGT TAT TGC AGC TTA TAA
 3901 TGG TTA CAA ATA AAG CAA TAG CAT CAC AAA TTT CAC AAA TAA AGC ATY TTT TTC ACT GGA TTC TAG TGG TTT GTC
 4057 GTT TCC TGT GTG AAA TTG TTA TCC GCT CAC AAT TCC ACA CAA CAT AGC AGC CCG BAG CAT AAA GTG TAA AGC CTG GGG
 4135 TGC CTA ATG AGT GAG CTA ACT CAC AAT TAT TGC GTT GCG CTC ACT GGC CCG TTT CCA GTC GGG AAA CTT GTC GTG CCA
 4213 GAA TTG CAT GAA GAA TCT GCT TAG GGT TAG GCG TTT TGC GCT TCG CTA GGT CAA TAT TGG CCA TTA GCC ATA
 4291 TTA TTC ATT GGT TAT ATA GCA TAA ATC AAT ATT GGC TAT TGG CCA TTG CAT ACG TTG TAT CCA TAT CAT AAT ATG TAC
 4369 ATT TAT ATT GGC TCA TGT CCA ACA TTA CCG CAG TTC CCA TGT TAA TTG ACT AGT TAT TAA TAG TAA TCA ATT ACG
 4447 GGG TCA TTA GTT CAT AGC CCA TAT ATG GAG TTC CCG GGT ACG AAT ACG AAT GGC CCG CTT GTC TGA CCG CCC
 4525 AAC GAC CCG CCG CCA TTG ACG TCA ATA ATG ACG TAT GGT CAC ATA GTA ACG CCA ATA GAG ACT TTC CAT TGA CCG CAA
 4603 TGG GTG GAG TAT TTA CCG TAA ACT GGC CAC TTG GCA GTA CAT CAA GTG TAT CAT ATG CCA AGT ACG CCC CTT AAT GAC
 4681 GTC ANT GAC GGT CAC CGT CTC AAG CCG CTC CAC CAA GGG CCG ATC GGT CTT CCG CTT GGC ACC CTC CTC CAA GAG CAC
 4759 CTC TGG GGG CAC AGC GGC CTT GGT CAA GGA CTA CTT CCG CCA ACC GGT GTC GTG GTC GTG GAA CTC AGG
 4837 CCG CTT GAC CAG CCG GGT CCA CAC CTT CCG GCG TGT CCA GTC CTC AGC ACT CTA CTC CTT CAG CAG CGT AGT GAC
 4915 GGT GCC CTC CAG CAG CTT GGG CAC CCA GAC CTA CAT CTG CAA CGT GAA TCA CCA GGC ACT CTA CTC CTT CAG CAG CGT AGT GAC
 4993 GAA AGT TGA GCC CAA ATC TTG TGC GGC CCG ACA TCA TCA TCA CCA TCA CCG GGC CCG AGA ACA AAT ACT CAT CTC AGA
 5071 AGA GSA TCT GAA TGG GGC CCG ATA GAC TGT TGA AGT TTG TTT AGC AAA ACC TCA TAC AGA AAA TTC AAT TAC TAA CGT
 5149 CTG GAA AGA CCA AAT TTT AGA TCG TTA CCG TAA CTA TGA GGG CTG TGT GTG GAA TGC TAC AGG CCA TCC TGT AAT TCC
 5227 TAC TGG TGA CCA AAC TCA GTG TTA CCG TAC ATG GGT TCC TAT TGC GCT TGC TAT CCC TGA AAA TGA GGG TGG TGG CTC
 5305 TGA GGG TGG CCG TTC TGA GGG TGG CCG TTC TGA GGG TGG CCG TAC TGA GGG TGG CCG TAC TAA ACC TCC TGA GGA AAA CCG GCA TAA TCC TTC
 5383 GGG CTA TAC TTA TAT CAA CCC TCT CCA CCG CCG CCA TTA TCC GCG TGG TAC TGA GCA AAA CCG GCA TAA TCC TTC
 5461 TCT TGA GGA GTC TCA GCC TCT TAA TAC TTT CAT GTT TCA GAA TAA TAG GTT CCG AAA TAG GCA GGG TGC AAT AAC TGT
 5539 TTA TAC GGG CAC TGT TAC TCA AGC CAC TGA CCC CGT TAA AAC TTA TTA CCA GTA CAC TCC TGT ATC ATC AAA AGC CAT
 5617 GTA TGA CCG TTA CTG GAA CCG TAA ATT CAG AGA CTG CAC TTT CCA TTC TGG CTT TAA TGA GGA TCC ATT CGT TTG TGA
 5695 ATA TCA AGG CCA ATC GTC TGA CTT GCC TCA ACC TCC TGT CAA TGC TGG TGG CCG CTC TGA AGG TGG TTC TGA TGG CCG
 5773 CTC TGA GGG TGG CCG CCG TGA GGG TGG CCG CTC TGA GGG TGG CCG TTC TGA AGG TGG CCG CTC TGA TGG CCG TTC
 5851 CCG TGG CCG CTC CCG TTC CCG TGA TTT TGA TTA TGA AAA AAT GGC AAA CCG TAA TAA GAG CAC ACT TGA TTC CCG TAC TGC TAT CCA TGG
 5929 CCA TGA AAA CCG GCT ACA GTC TGA CCG TAA AGG CAA ACT TGA TTC TGT CCG TAC TGC TTT TGC TGG TGA TTT CCA AAT GGC
 6007 TTT CAT TGG TGA CGT TTC CCG CTT TCC TAA TGG TGC TAC TGG TGA TTT TGC TGA TTT ACC TTC TTT GGC TCA GTC GGT TGA
 6085 TCA AGT CCG TGA CCG TGA TAA TTC ACC TTT AAT GAA TTA TTT CCG TCA ATA TTT ACC TTC TTT GGC TCA GTC GGT TGA
 6163 ATG TCG CCC TTA TGT CTT TGG CCG TGG TAA ACC ATA TGA AAT TTC TAT TGA TTG TGA CAA AAT AAA CTT ATT CCG TGG
 6241 GGT CTT TGC GTT TCT TTT ATA TGT TGC CAC CTT TAT TAT TTT TTT GAC GTT TGC TAA CAT ACT GCG TAA TAA GGA
 6319 GTC TTA ATA AGA ATT CAC TGG CCG TGG TTT TAC AAC GTC ACT GGG AAA ACC CTG CCG TTA CCC AAC TTA ATC GCC

Figure 12 contd

6397 TTG CAG CAC ATC CCC CTT TCG CCA GCT GGC GTA ATA GCG AAG AGS CCC GCA CCG ATC GCC CTT CCC AAC AGT TGC GCA
 6475 GCC TGA ATG GCG AAT GGC GCG TGA TGC GGT ATT TTC TCC TTA CCG ATC TGT TGT GGT TAC GCG CAG GGT GAC CCG TAC ACT
 6553 GCA ACC ATA GTA CCG CCG TAG CCG CCG ATT AAG GCG GCG TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT TGT
 6631 TGC CAG CCG CTT AGC GCG CCG CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT CTT
 6709 TCT AAA TCG GCG GCT CCC TTT AGG GTT CCG ATT TAG TGC TTT ACG GCA CCT GSA CCC CAA AAA A

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1 TAC TCT TCC TTT TTC AAT ATT ATT GAA GCA TTT ATC AGG GTT ATT GTC TCA TGA GCG GGT ACA TAT TTG AAT GTA TTT
 79 AGA AAA ATA ABC AAA TAG GGG TTC CCG GTA CAT TTC CCC GAA AAG TGC CAC CTG ACG TCG ACG GAT CCG GAG ATC TCC
 157 CCA TCC CTT ATG GTG CAC TCT CAG TAC TAT CTG CTC TGA TGC CCG ATA GTT AAG CCA GTA TCT GCT CCC TGC TTG TGT
 235 GTT GGA GGT CCG TGA GTA GTG CCG GAG CAA AAT TTA AGC TAC AAC AAG GCA AGG CTT GAC CGA CAA TTG CAT GAA GAA
 313 TCT GCT TAG GGT TAG CCG TTT TGC GCT GCT TCG CTA GGT GGT CAA TAT TGG CCA TTA GCC ATA TTA TTC ATT GGT TAT
 391 ATA GCA TAA ATC AAT ATT GGT TAT TGG CCA TTG CAT ACG TTG TAT CCA TAT CAT AAT ATG TAC ATT TAT ATT GGT TCA
 469 TGT CCA ACA TTA CCG CCA TGT TGA CAT TGA TTA TTG ACT AGT TAT TAA TAG TAA TCA ATT ACG GGG TCA TTA GTT CAT
 547 AGC CCA TAT ATG GAG TTC CCG GTT ACA TAA GTT ACG CCA ATA GCG CCA ATA GCG ACT TTC CAT TGA CGT CAA TGG GTG GAG TAT TTA
 625 TTG ACG TCA ATA AAG ACG TAT GTT CCA ATA GCG CCA ATA GCG ACT TTC CAT TGA CGT CAA TGG GTG GAG TAT TTA
 703 CCG TAA ACT GCG CAC TTG GCA GTA CAT CAA GTG TAT CAT ATG CCA AGT ACG CCC CTT ATT GAC ATC TAC GTA TTA GTG ATC
 781 TGG CCG GCG TGG CAT TAT GCG CAG TAC ATG ACC TTA TGG GAG TTT CCG GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT
 859 GCT ATT ACC ATG GTG ATG CCG TTT TGG CAG TAC ATC AAT GGG AGT TTT TTT TGG CAC CAA AAT CAA CCG GAC TTT CCA AAA TGT CST AAC AAC TCC
 937 CTC CAC CCC ATT GAC GTG CAC AAT GGG AGT TTT TTT TGG CAC CAA AAT CAA CCG GAC TTT CCA AAA TGT CST AAC AAC TCC
 1015 GGC CCA TTG ACG CAA ATG GGC GGT AGC CTT GTC CCG GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT GGT
 1093 ATC GCG TGG AGA CCG CAT CCA CCG TGT TTT GAC CTC CAT AGA AGA CAC CCG GAC CCA TCC AGC CTC CCG GCG CCG GAA
 1171 CCG TGC ATT GGA AGC TTG GTA CCG GTG AAT TCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 1249 AGA GGC CCG AAT TCC CTA GCC ACC ATG GGA TGG AGC TGT ATC ATC CTC TTC TTG GTA CTG CTG GCG GAC TAT GGT TGC TGA
 1327 ATG GGG CCG AGA ATG GGC GGA ACT GGG CCG AGT TAG GCG CCG GAT TAG GCG CCG GAT TAG GCG CCG GAT TAG GCG CCG GAT
 1405 CTA ATT GAG ATG CCG ATC CCG TGG CAC GAC AGS TTT CCC GAC TGG AAA GCG GCG AGT GAG CCG AAC GCA AAT AAT GTG
 1483 AGT TAG CTC ACT CAT TAG GCA CCC CAG GCT TTA CAC TTT ATG CTT CCG GCT CGT ATG TTG TGT GGA ATT GTG AGC GGA
 1561 TAA CAA TTT CAC ACA GGA AAC AGC TAT GAC CAT GAT TAC GCC AAG CTT GGG CTG CAG GTT CTT TCC GCC TCA GAA GCC
 1539 ATA GAG CCC ACC GCA TCC CCA TGC CTA TTG TCT TCC CAA TCC TCC CCG CTG CTG TCG TCG CCG ACC CCA CCG
 1717 CCC AGA ATA GAA TGA CAC CTA CTC AGA CAA TGC GAT GCA ATT TCC TCA TTT TAT TAG GAA AGS ACA GTG GSA GTG GSA
 1795 CCT TCC NCG GTG AAG GAA GGC ACG GGG GAG GGG CAA ACA GAT GGC TGG CAA CTA GAA GGC ACA GTG GAG GGT GAT
 1873 CAG CGA GCT CTA GAT CAT CGA TGC ATG GGG TCG TCG GCT CTT TCG GGT CCG GCG CTG CCG GTC GTG GGG CCG GCG TCA
 1951 GGC ACC GGG CTT GCG GGT CAT GCA CCA GGT GCG CCG TCC TTC GGG CAC CTC GAC GTG GGT GGT GGT GGT GGT GGT GGT
 2029 CCG CTC GTA GAA GGG GAG GTT GCG GCG CCG GGA GGT CTC CAG GAA GGC GGG CAC CCC GCG CCG CTC GCG CTC CAC
 2197 TCC GGG GAG CAC GAC GCG GCT GCG GCG CCG GCG CCG GCG CCG GCG CCG GCG CCG GCG CCG GCG CCG GCG CCG GCG
 2363 CAT GCG CCG GCG GAT CTC GCG GAA CAC CCG CCG TTT CAG GCT CTC CCG GGT CCA GAC CCG CAC CCG GCG GCG GCG
 2341 GTC GTC CCG GAC CCA CAC CTT GCG GAT GTC GCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 2419 CAG TGC TAG CAC CAA GGG CCC ATC GGT CTT CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 2575 CAC CTT CCG GCG TGT CTA GTC CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG CCG
 2653 CAC CCA GAC CTA CAT CCG CAA CCG CAG CAA CAC CAA GGT GGA CAG AGT TGG TGA GAG GCG AGC
 2731 ACA GGG AGG GGT GTC TGC TGG AAG CTA GGC TCA CCG CTC CTT GHA GCG ATC CCG GAT ATG CAG TCC CAG TCC
 2809 AGG GCA GCA AGG CAG GCG CCG TCT TCA CCC GGA GGC CTC TGC CCG CCC CAC TCA TGC TCA GGG AGA GGG TCT
 2887 TCT GGC TTT TTC CCG ACG CTC TGG GCA GCG TAG GGT CTA ACC CCG CTG CAC ACA AAG GGG CAG GTG
 2965 CTG GCG TCA GAC CTC CCA AGA AGC AAT TCC GGG AGG ACG CTG CCC CTG ACC TAA GCC CCA AAA GCG CAA ACT CTC
 3043 CAC TCC CTC AGC TCG GAC ACC TTC TCT CCT CCC AGA TTC CAG TAA CTC CCA ATC TTC TCT CTG CAG AGC CCA AAT CTT

Figure 12 contd

3121 GTG ACA AAA CTC ACA CAT GCC CAC GGT GCC CAG CAC CTG AGG TCA CAT GCG TGG GGG GAC CGT CAG TCT TCC TCT TCC ACC CCA
 3139 AAC CCA AGS ACA CCC TCA TGA TCT CCC GGA CCC CTG AGG TCA CAT GCG TGG TGG TGG TGG TGG TGG TGG TGG TGG TGG TGG
 3277 AGG TCA AGT TCA ACT AGT TGG TGG TCA GCG TCC TCA CCG TCG AGG TGC ATA AGT CCA AGA CAA AGC CGC GGG AGG AGC AGC AGC
 3335 GCA GGT ACC GTG TGG TCA GCG TCC TCA CCG TCG AGG TGC ATA AGT CCA AGA CAA AGC CGC GGG AGG AGC AGC AGC AGC AGC
 3433 CCA ACA AAG CCC TCC CAG CCC CCA TCG AGA AAA CCA TCT CCA AAG CCA AAG GGC AGC AGC AGC AGC AGC AGC AGC AGC AGC
 3511 CCC TGC CCC CAT CCC GGG AGG AGA TGA CCA AGA AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC
 3589 ACA TCG CCG TGG AGT GGG AGA GCA ATG GGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC
 3667 GCT CCT TCT TCT ATA GCA AGC TCA CCG TGG AGG AGA GGT GGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC AGC
 3745 TGC ATG AGS CTC TGC ACA ACC ACT ACA CCG AGA AGA GGC TCT CCG TGT CTC CCG GTA AAT GAG TTT MAC GGA TCT TAA
 3823 TTA ATC GGA GCT CCG TAC CAA GCT TAA GTT TAA ACC GCT GAT CAG CCT CCA CTG TCC TTT CCT AAT AAA ATG AGG AAA
 3901 TTG TTT GCG CTT CCG CCG TGC TCT CTT TGA CCC TGG AAG GTG CCA CTC CCA CTG TCC TTT CCT AAT AAA ATG AGG AAA
 3979 TTG CAT CCG ATT GTC TGA GTA GGT GTC ATT CTA TTC TGG GGG GTG GGG TGG GGC AGC AGA CCA CCG CTC CCG TGG AGC
 4057 AAG ACA ATA GCA GGC ATG CTG GGG ATG CAG TGG GCT CTA TGG GGT CTT CTG AGG CCG AAA GAA CCA CCA GCT GGT CTA GGG
 4135 GGT ATC CCG ACG CCG CTT GTA GCG GCG CAT TAA GCG CCG GGG GTG TGG TGG TGA CCG GGA TGA CCG CTA CAC TAT
 4213 CUA GGG CCT AGC GCG TCC TCT TTT CCG TTT CCG TTT TCT CCG CAC GTT CCG CCG CTT TCC CCG TCA AGC TCT
 4291 AAA TCG GGG GCT CCC TTT AGG GTT CCG ATT TAG TGG TTT ACG GCA CCT CGA CCC CAA AAA ACT TGA TTA GGG TGA TGG
 4369 TTC AGG TAG TGG GCC ATC GCC CTG ATA GAC GGT TTT TCG CCC TTT GAC GTT GGA GTG CAC GTT CTT TAA TAG TGG ACT
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Figure 13
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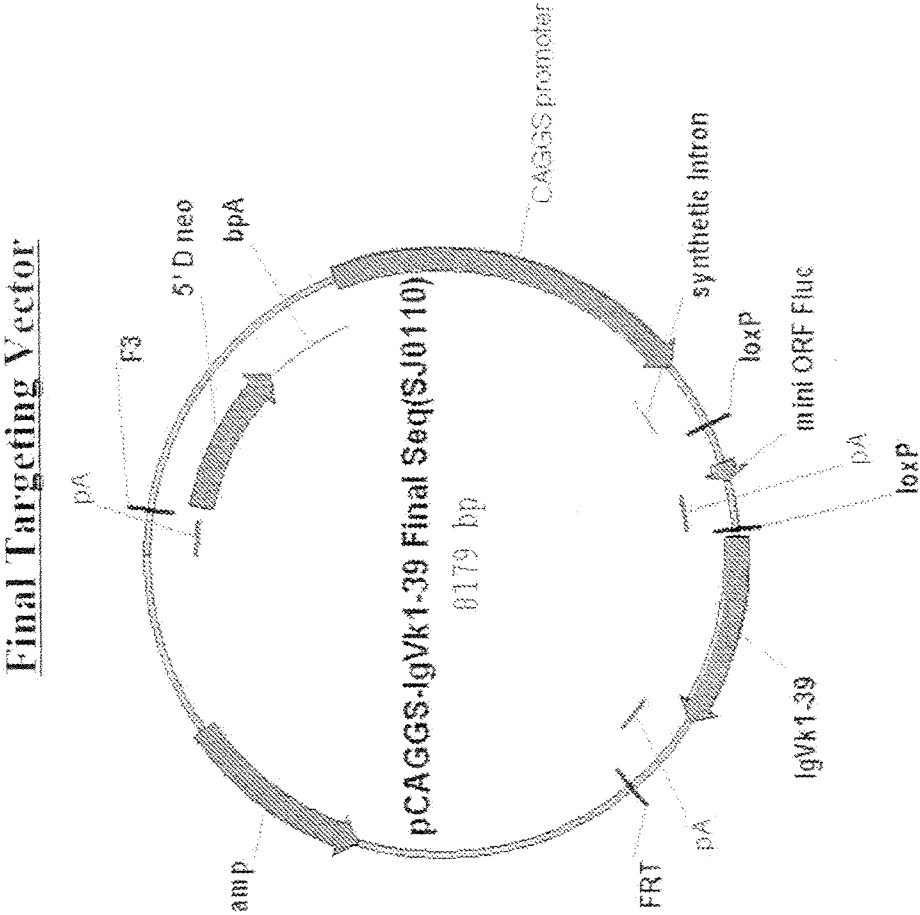


Figure 13 contd

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Figure 13 contd

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Figure 13 contd

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Figure 13 contd

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Figure 13 contd

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Figure 13 contd

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Figure 13 contd

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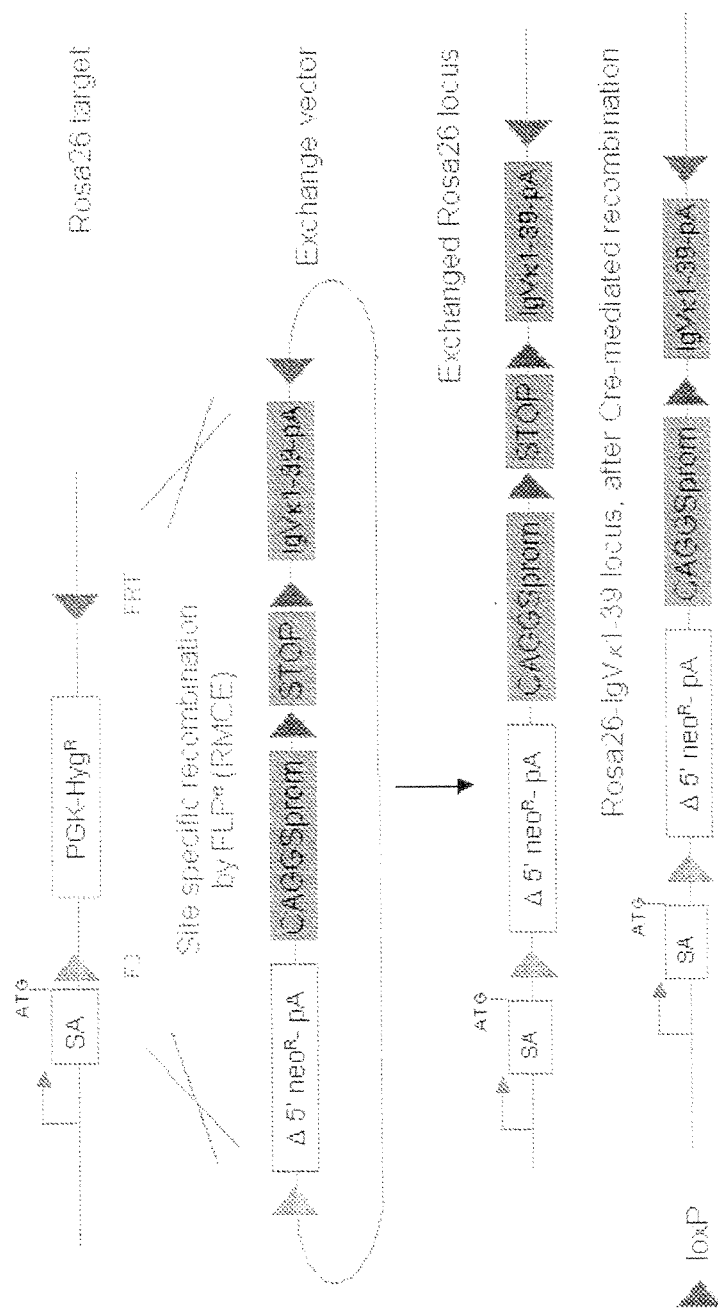
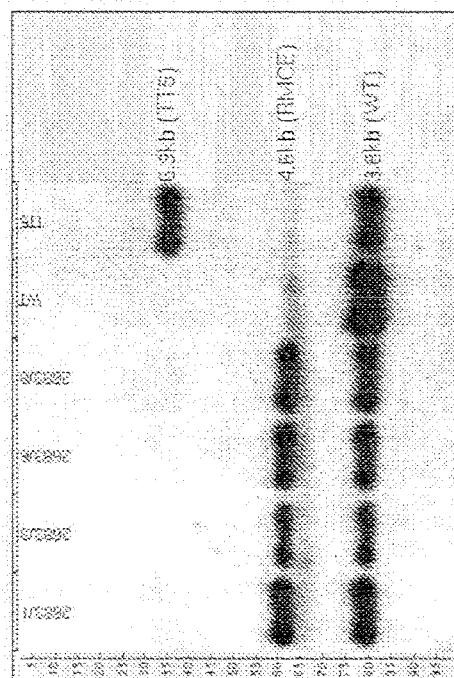


Figure 14

A



B

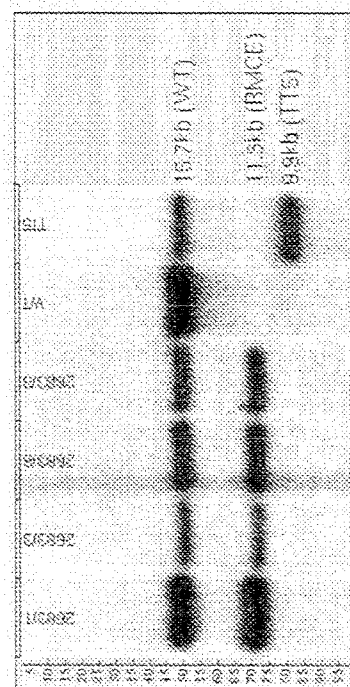


Figure 14 contd

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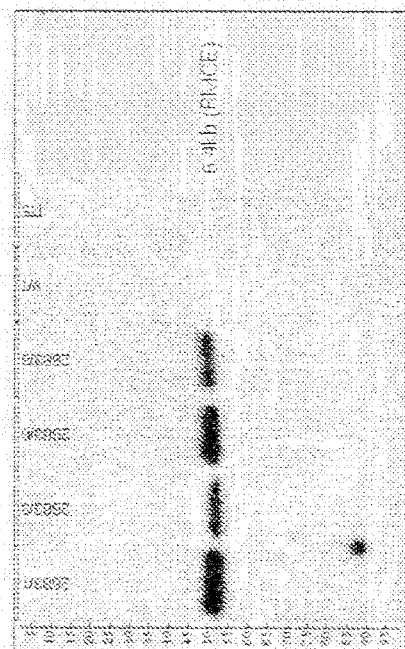


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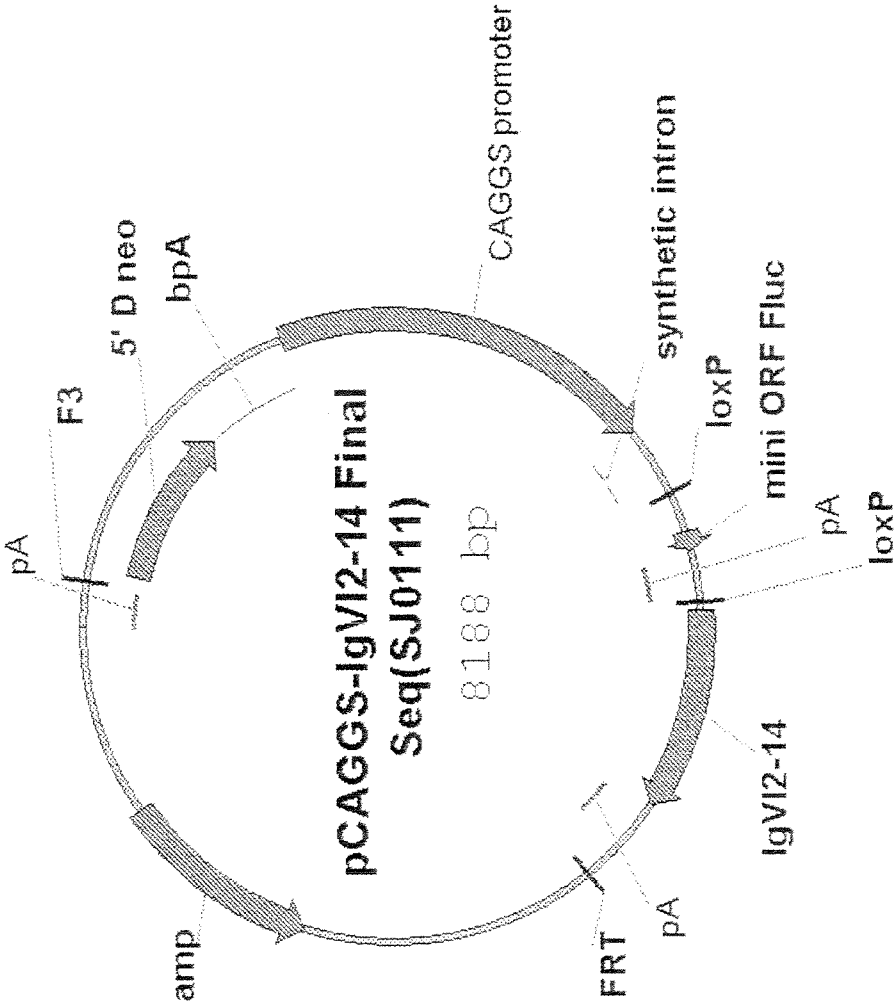


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Figure 15 contd

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 1501 tgccaaagttc taattccatc agaagctgac tcagatgagc gttttcgaca
 1561 ttgattattg actagttatt aatagtaato aattacgggg tcattagttc atagcccata
 1621 tatggagttc cgcgtttacat aacttacggt aaatggcccc cctggctgac cccccaaaga
 1681 cccccgcca ttgacgtcaa taatgacgta tgtccccata gtaacgcca tagggacttt
 1741 ccattgacgt caatgggtgg agtatttacg gtaaaactgc cacttggcag tacatcaagt
 1801 gtatcatatg ccaagtacgc cccctattga cgtcaatgac ggtaaatggc cgcctggca
 1861 ttatgccccag tacatgaact tatgggactt tccacttgg cagtacatct acgtattagt
 1921 catcgctatt accatggctg aggtgagccc cagttctgc ttcactctcc ccactcccc
 1981 cccctcccca cccccaattt tgtattttat ttatttttaa ttattttgtg cagcgatggg
 2041 ggcggggggg gggggggggc gcgccaggcg ggcgaggggg cggggcgggg ttcccttta
 2101 cgaggcgagg aggtgcggcg gcagccaato agagcggcgc gctccgaaaag ttcccttta
 2161 tggcgaggcg gcggcgggcg cggccctata aaaagcgaaag cgcgcggggg gcggggagtcg
 2221 ctgctgtgac ttgcggcggt gcccgcgctc gcgcggcgcc ccccggtctc
 2281 gactgacgc gttactccca caggtgagcg ggcggggacgg ccttctctc cggggctgta
 2341 attagcgtt ggtttaatga cggctcgttt ctcttctgtg gctgctgaa agccttaaaag
 2401 ggctccggga ggccctttg tgcggggggg agcggtcgtg ggggtgctg cgtgtgtgtg
 2461 tgcgtgggga gcgcgcgtg cggcccgcg cgcgcggcg ctgtgagcgc tgcgggcgcg
 2521 gcgcgggggt ttgtgcgc cgcgtgtgcg caggggggagc gcggcggggg gcggtgcccc
 2581 gcggtgcggg ggggctgcga ggggaacaaa ggtgcgtgc ggggtgtgtg cgtggggggg
 2641 tgagcagggg gtgtgggcgc ggcggtcggg ctgtaacccc cccctcccg cccctcccg
 2701 agttgctgag cacggccccg ctgcgggtgc ggggtccgt gcggggcggt gcgcgggggt
 2761 cgcgtgcgc ggcgggggggt ggcggcaggt ggggggtgcg ggcgggcggt ggcgcctgcg
 2821 ggcgggggag ggcgcggggg agggcgcgcg cggccccgga gcgcggcgcg ctgtcgaggc
 2881 gcggcgagcc gcagccattg ccttttatgg taatcgtgcg agggggcgca gggacttct

Figure 15 contd

2941 ttgtcccaaa tctgtgcgga gccgaaatct gggaggcgcc gccgcacccc ctctagcggg
3001 cgcggggcga agcgtgtcgg cgcgggcagg aaggaaatgg cgggggaggg ccttcgtgcg
3061 tgcgcgcgc gccgtccct tctccctctc cagccctggg gctgtccgcg gggggacggc
3121 tgccttcggg ggggaacggg cagggcgggg ttcggcttct ggcgtgtgac cggcggtctct
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3241 cagtttccaa aaacgaggag gatttgatat tcacctggcc cgcgggtgat cctttgaggg
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3361 ggtttgagat ctggccatac acttgagtga catlgacatc cactttgctt ttctctccac
3421 aggtgtccac tcccaggggc gctccggag cgtccgcga tccgcctagg caattgttta
3481 aatcggccgg ccataacttc gtataatgta tgcatacga agttatggat cctcacagta
3541 ggtggcatcg tcccttctg actgcccgc cccgcctgc cgtccgcga tattgagctc
3601 cgaacctctc gccctgcgc cgcgggtgct cgtcgcgc cgcgcgcga tggaaatcgaa
3661 gccaccatgg atcttaccgg aaaactcgac gcaagaaaaa tcagagagat cctcataaag
3721 gtaagaaagg gggaaagat cgcgtgttaa tctagaccg gttcgagatc caggcgcgga
3781 tcaataaag atcattattt tcaatagatc tgtgtgttgg ttttttgtgt gccttggggg
3841 agggggaggc cagaatgagg cgcggccaa ggggaggggg agccagaat gaacttgggg
3901 gagggggagg cagaatgac cttgggggag ggggaggcca gaatgaggcg cgcctcgt
3961 cgaactataa cttcgtataa tgtatgctat acgaagtat ggcggccgc accatggaca
4021 tgagagtgc cgcacagctc ctggggctcc tgcactctg gctccgaggt aaggatggag
4081 aacactagga atttactcag ccagtgtgct cagtactgac tggaaacttca gggaaagtct
4141 ctgataacat gattaatagt aagaatattt gtttttatgt ttccaatctc aggtgccaga
4201 tgtcagctct cctgaccca gccgcctct gtgtctgca gccctggcca gagcaccac
4261 atcagctgca ccggcaccag cagcgacgtg ggcggctaca actacgtgtc ctggtatcag
4321 cagcaccctg gcaaggcccc caagctgatg atctacgagg tgtccaaacg acccagcggc
4381 gtgagcaaca gattcagcgg cagcaagagc ggaacacccg ccagcctgac catcagcggc
4441 ctccaggctg aggacgaggc cgactactac tgcagcagct acaccagcag ctccacctg

Figure 15 contd -48/72-

4501 gtgttttggg gcggaacaaa gctgaccgtg ctgagagccg acgcgctcc caccgtgtcc
 4561 atcttcccc ccagcatgga acagctgacc tctggcgag ccaccgtgg ctgctctgtg
 4621 aacaaattct accccagaga catcagcgtg aagtggaaga tcgacggcag cgaacagagg
 4681 gacggcgtgc tggacagcgt gaccgaccag gacagaaagg actccacctc cagcatgagc
 4741 agcaccctga gctgaccaa ggtggagtac gagaggacac acctgtacac ctgcgagggtg
 4801 gtgcacaaga ccagctccag cccgtggtc aagtccttca accggaaaca gtgttgagct
 4861 agcttaagat ttaaataggc cggcgcgtc gacctgaga tccaggcgag gatcaataaa
 4921 agatcattat ttccaataga tctgtgtgtt ggttttttgt gtgcttggg ggaagggggag
 4981 gccagaatga ggcgcggcca agggggaggg ggaggccaga atgaccttg gggagggggga
 5041 ggccagaatg accttggggg agggggaggc cagaatgagg cgcgcctcg ggtaccgagc
 5101 tcgaattagt ggaacctac agtaggtggc atcgttctct tctgactgcc cgtccccccg
 5161 atgcccgtcc gcgatatatga gctccgaacc tctgcctcg ccgcgcctcg tctccctcg
 5221 ccgcgcgcgc gccatggaat cgcgcggta accgaagttc ctatactttc tagagaatatg
 5281 gaacttcgga atagggaactt caagccggtc ccagcttttt gtcccttta gtgaggggta
 5341 atttogaagt tggcgtaatc atgggtcatg ctgtttctat tctgaaattg ttatccgctc
 5401 acaattccac acaacatacg agccgggagc ataaagtgtc aagcctgggg tgcctaataga
 5461 gtgagctaac tcacattaat tgcgttgcgc tcaactgcctg ctttccagtc gggaaacctg
 5521 tctgtccagc tgcattaatg aatcggccaa cgcgcgggga gaggcggttt gcgtattggg
 5581 cgtcttctcg ctctctcgt cactgactcg ctgcgctcgg tctgtcggct gcggcgagcg
 5641 gtatcagctc actcaaaagg ggtataatcg ttatccacag aatcagggga taacgcagga
 5701 aagaacatgt gagcaaaaag ccagcaaaaag gccaggaacc gtaaaaaagg cgcgttctgtg
 5761 gcgtttttcc ataggctccg cccccctgac gaggcatcac aaaatcgacg ctcaagtcag
 5821 aggtggcgaa acccgacagg actataaaga taccaggcgt tccccctgg aagtcctctc
 5881 gtgcgtctc ctgttcgac cctgcgcctt accggatacc tgtccgcctt tctccctctg
 5941 ggaagcgtgg cgttttctca tagctcagc tgtaggatc tcagttcggg taggtcgtt
 6001 cgtcccaagc tgggtgtgtg gacgaacccc cccgttcagc ccgaccgctg cgccttatcc

Figure 15 contd
-49/72-

6061 ggtaactatc gtcttgagtc caaccgggta agaacagact tatcgccact ggacagcagc
 6121 actgggtaaca ggattagcag agcagggtat gtaggcytyt ctacagagtt ctltgaagtgg
 6181 tggcctaact acggtacac tagaaggaca gtatttggta tctggctctt gctgaagcca
 6241 gttaccttcy gaaaaagagt tggtagctct tgcctggca acaaacccac cgtggtagc
 6301 ggtgggtttt ttgtttgcaa gcagcagatt acgcgcagaa aaaaaggatc tcaagaagat
 6361 cctttgatct tttctacggg gtctgaagct cagtggaaag aaaactcacg ttaagggatt
 6421 ttgggtcatga gattatcaaa aaggatcttc acctagatcc ttttaaatla aaatgaagt
 6481 ttttaaatcaa tctaaagtat atatgagtaa acttggctcg acagttacca atgcttaatc
 6541 agtgaggcac ctatctcagc gatctgtcta tttcgttcat ccatagttgc ctgactcccc
 6601 gtctgttaga taactacgat acgggagggc ttaccatctg gcccagtgcc tgcattgata
 6661 ccgcgagacc cagctccacc ggctccagat ttatcagcaa taaaccagcc agcgggaagg
 6721 gccgagcgca gaagtggctc tgcacattta tccgctcca tccagctctat taattgttgc
 6781 cggggaagcta gagtaagtag ttgcacagtt aatagtttgc gcaacgttct tgcatttgct
 6841 acaggcatcg tgggtgcacg ctctgtcttt ggtatggctt cattcagctc cggttcccaa
 6901 cgatcaaggc gattacatg atccccatg ttgtgcaaaa aagcgggttag ctcttcgggt
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 7081 tcaaccaagt cattctgaga atagtgtatg cggcgaccga gttgctctttg ccggcgctca
 7141 atacgggata ataccggcc acatagcaga actttaaaag tgctcatcat tggaaaaact
 7201 tottcggggc gaaaactctc aaggatctta ccgtgttga gatccagttc gatgtaacct
 7261 actcgtgcac ccaactgac ttacgcatct ttactttca ccagcgtttc tgggtgagca
 7321 aaaaacaggaa ggcataatgc cgcataaaag ggaataaagg cgacacggaa atgttgaata
 7381 ctcatactct tctttttca atattattga agcatttacc aggtttattg totcatgagc
 7441 ggatacatat ttgaatgtat ttgaaaaaat aaacaaatag gggttccgcg cacatttccc
 7501 cgaaaaagtc cacctaaaatt gtaagcgta atattttgtt aaatttcgcg ttaaattttt
 7561 gttaaatcag ctcatttttt aaccaatagg ccgaaatcgg caaaatccct tataaatcaa

Figure 15 contd

-50/72-

7621 aagaatagac cgaatatagg ttgagtgttg ttccagtttg gaacaagagt ccactattaa
7681 agaactgga ctccaacgtc aaaggcgaa aaaccgtcta tcaggcgat ggccactac
7741 gtgaaccatc accctaatac agtttttttg ggtcgaggtg ccgtaaagca ctaaaatcga
7801 accctaaagg gagccccga tttagagctt gacgggggaaa gccggcgaaac gtggcgagaa
7861 aggaaggga gaaagcgaaa ggagcgggcg ctaggcgct ggcaagtgtg gcggtcacgc
7921 tgcgcgtaac caccacacc gccgcgctta atgcgcgct acaggcgcg tccattcgc
7981 cattcaggct gcgaactgt tgggaaggcg gatcggtycg ggctctctcg ctattacgcc
8041 agctggcgaa aggggatgt gctgcaaggc gattaagtgt ggtaacgca gggttttccc
8101 agtcacgacg ttgtaaaacg acggccagtg agcgcgctga atacgactca ctataggggcg
8161 aattgggggt aactaagtaa ggatcgag

Figure 15 contd
-51/72-

C

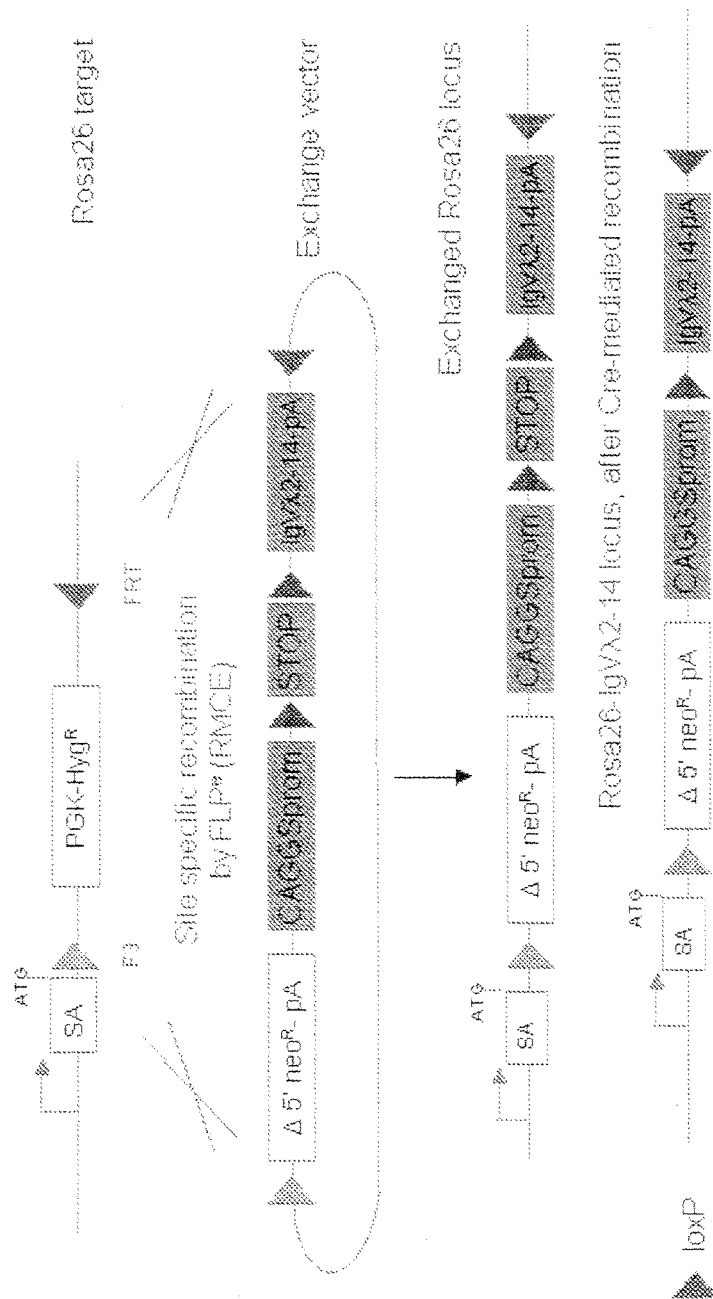


Figure 16

~~52/72~~

A

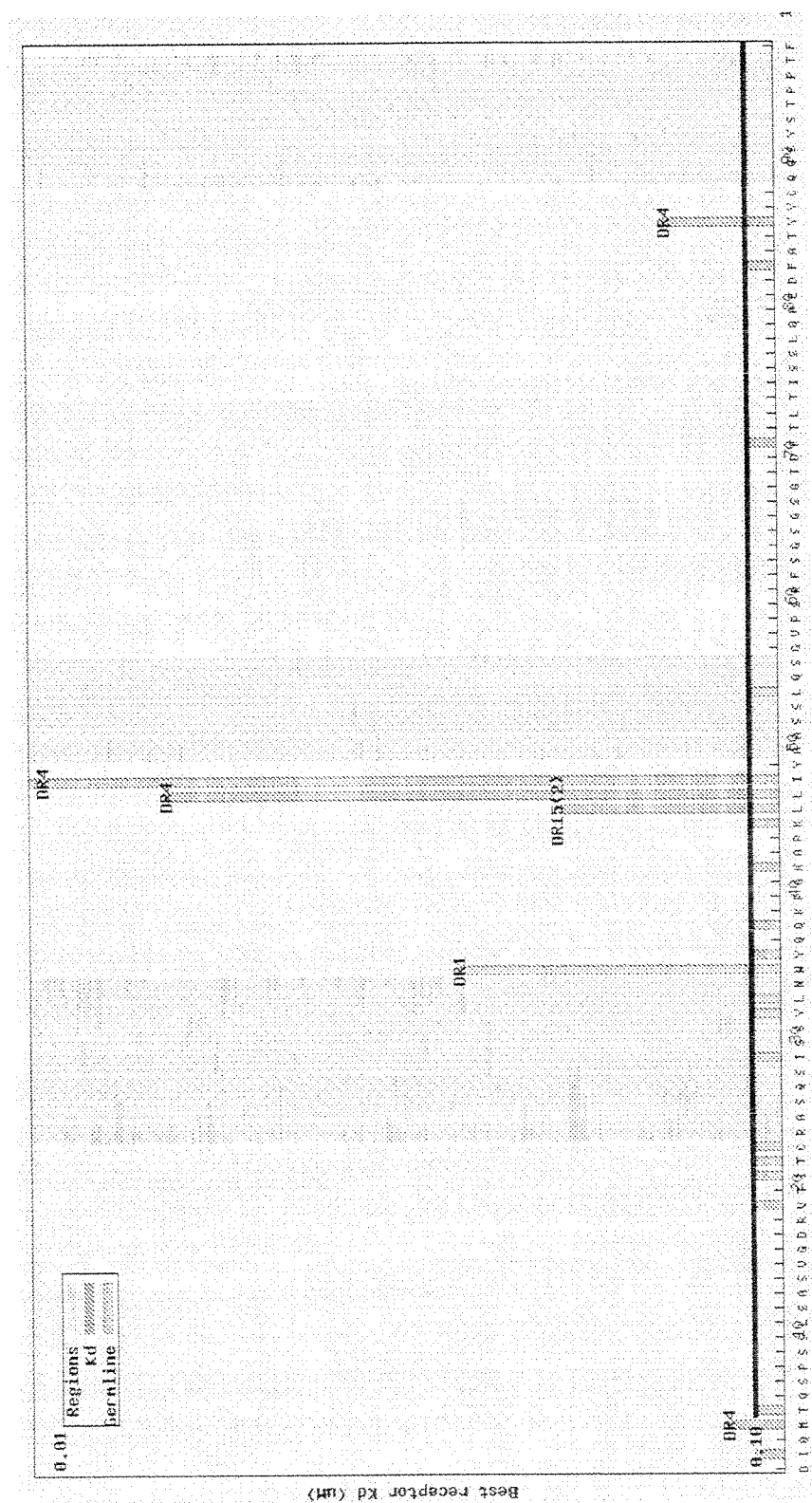


Figure 16 contd

~~53/72~~

3

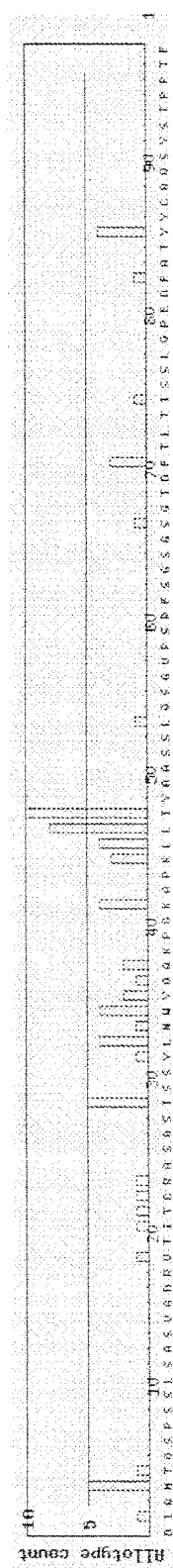
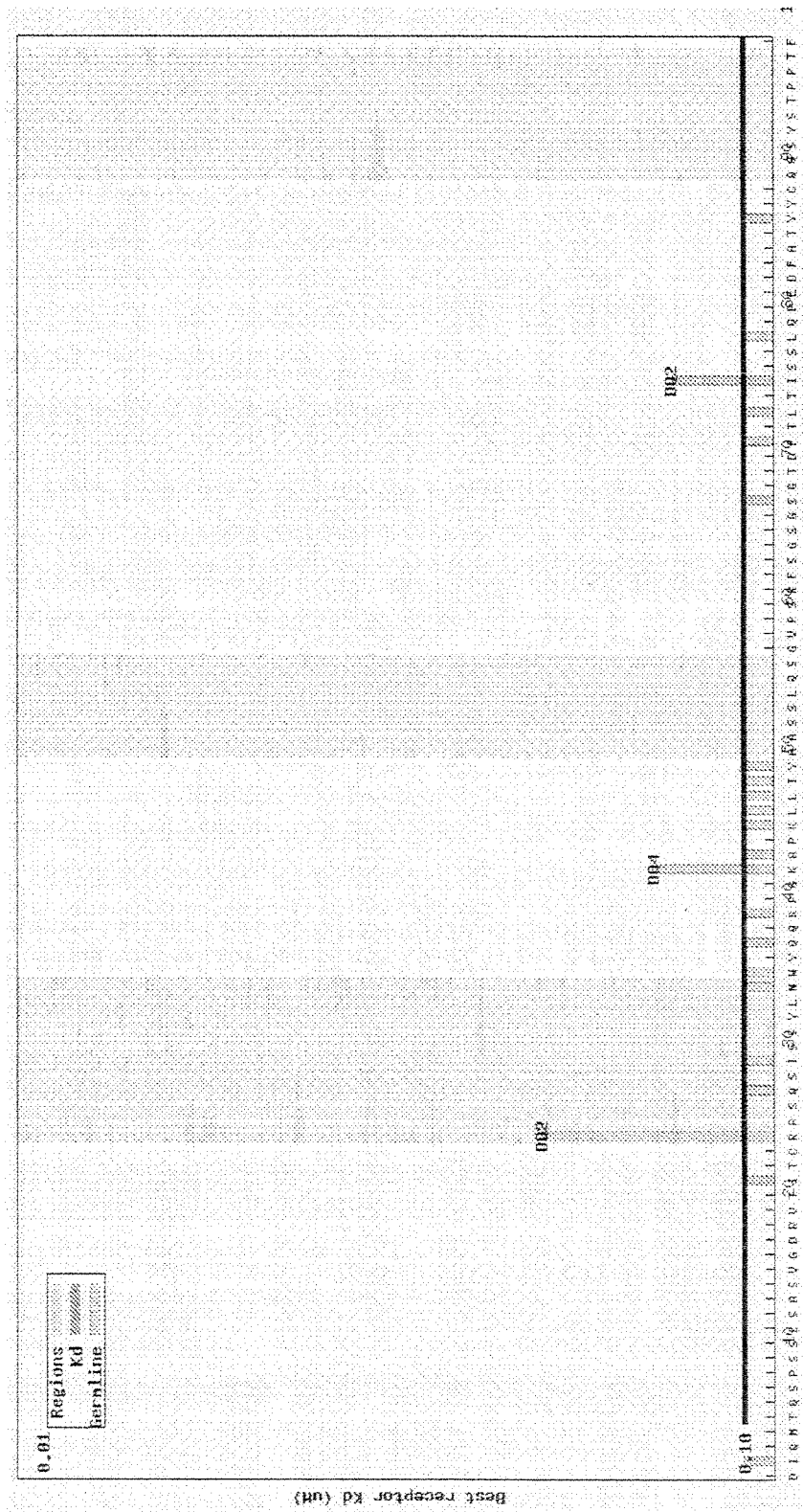


Figure 16 contd

C



-55/72-

Figure 17

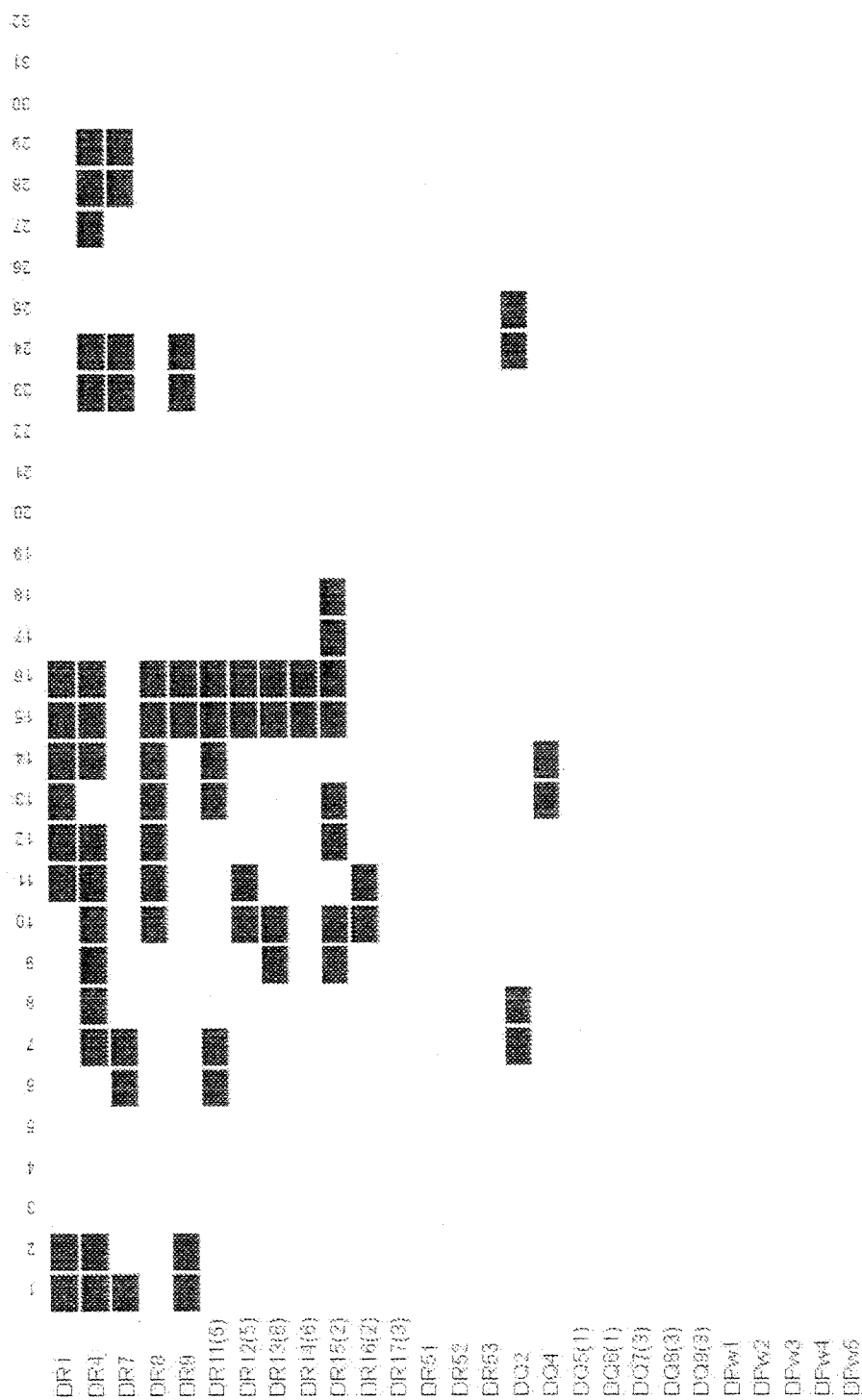
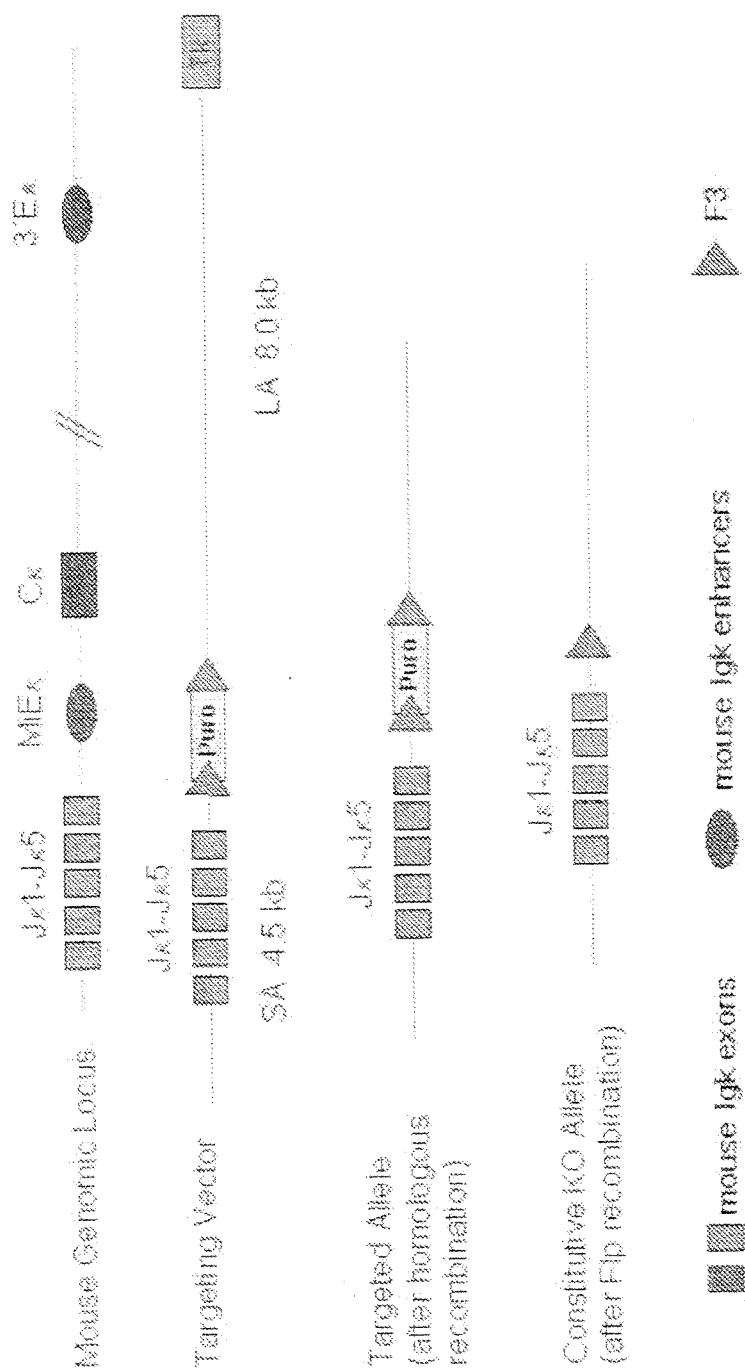


Figure 18

A



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Figure 18 contd

B

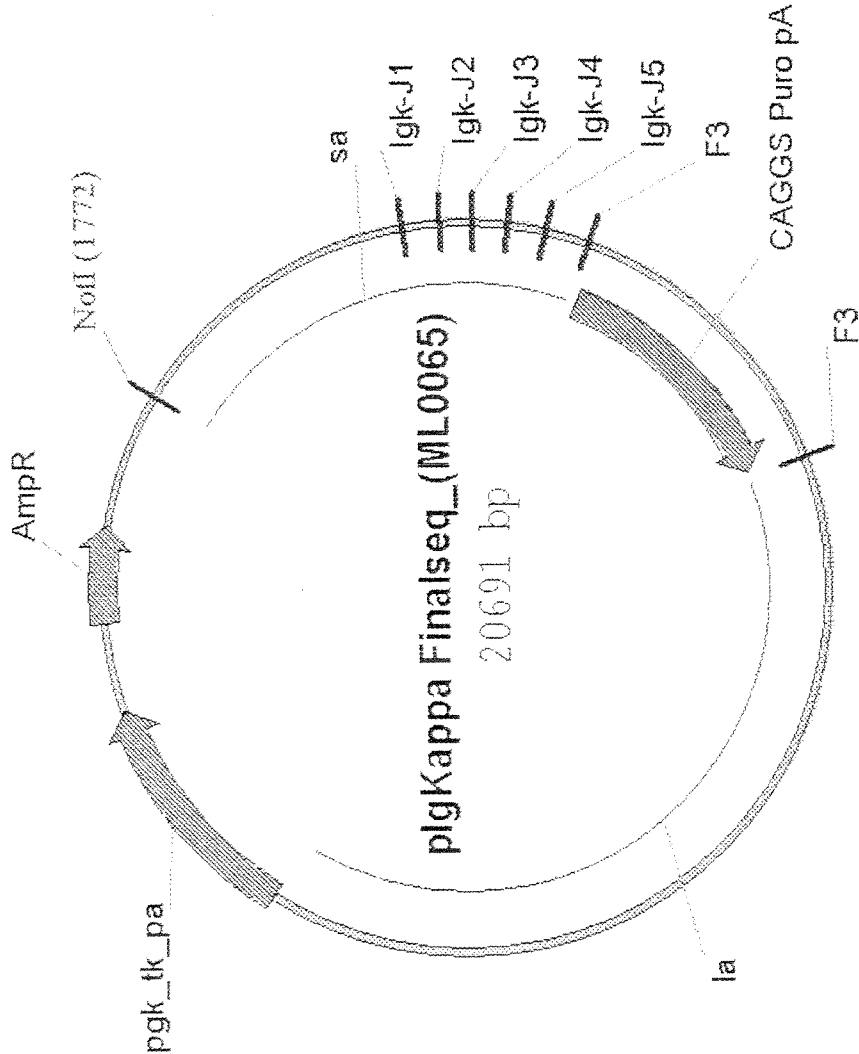


Figure 19 -58/72-

A

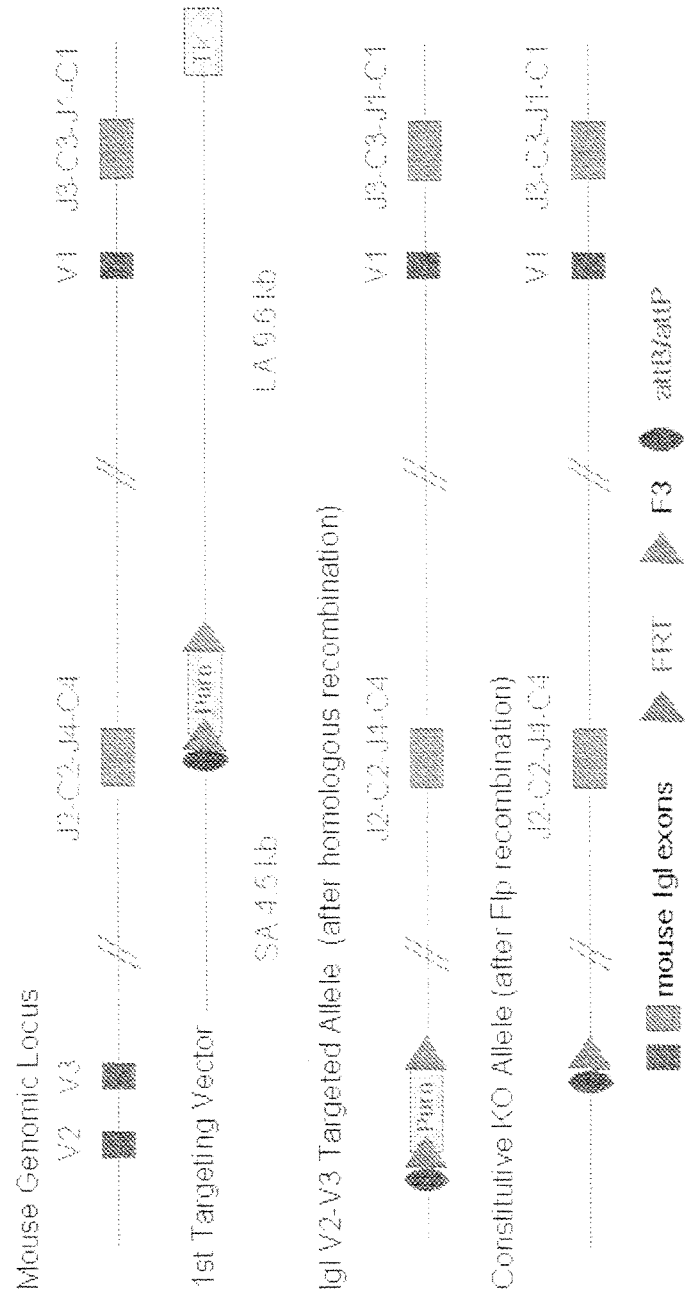
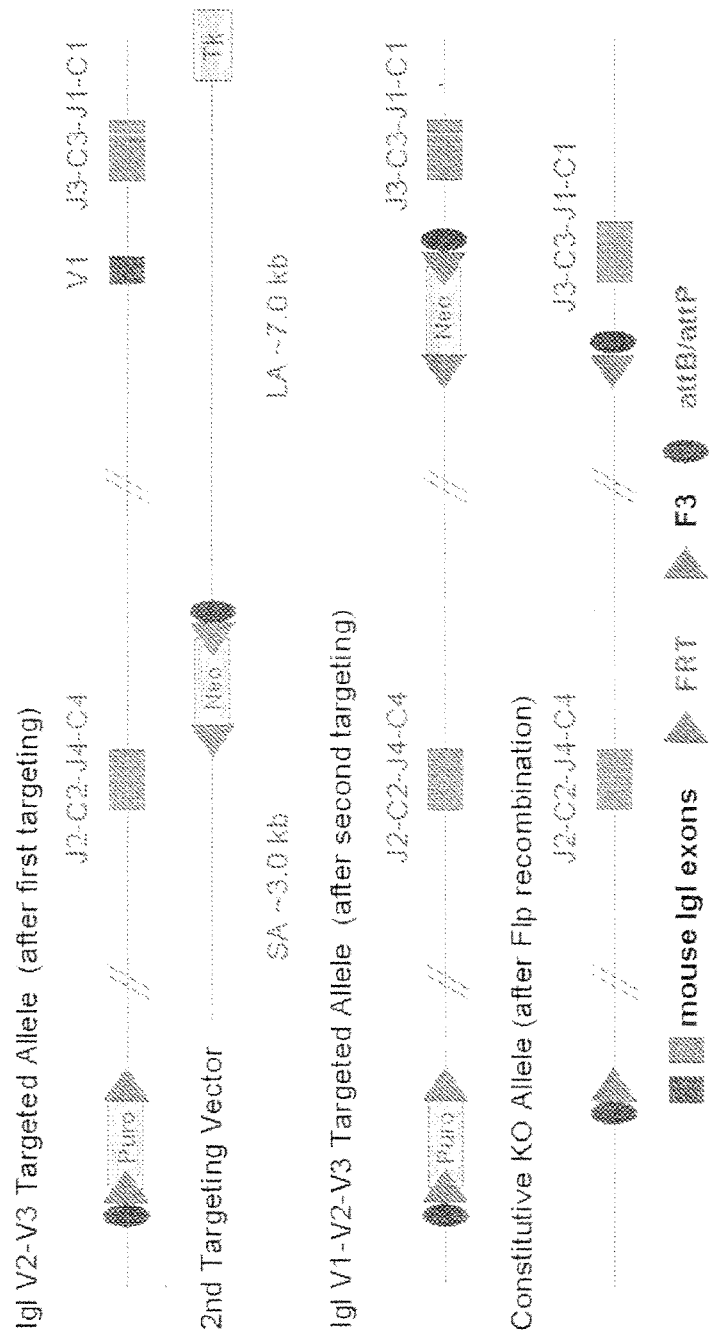


Figure 19 contd -59/72-

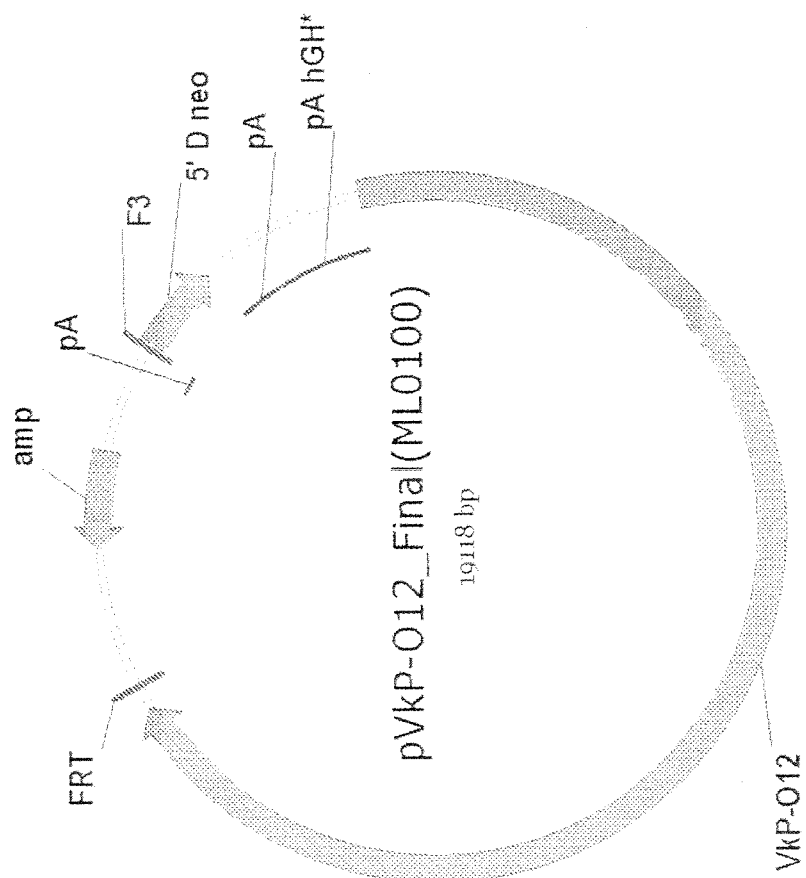
B



-60/72-

Figure 20

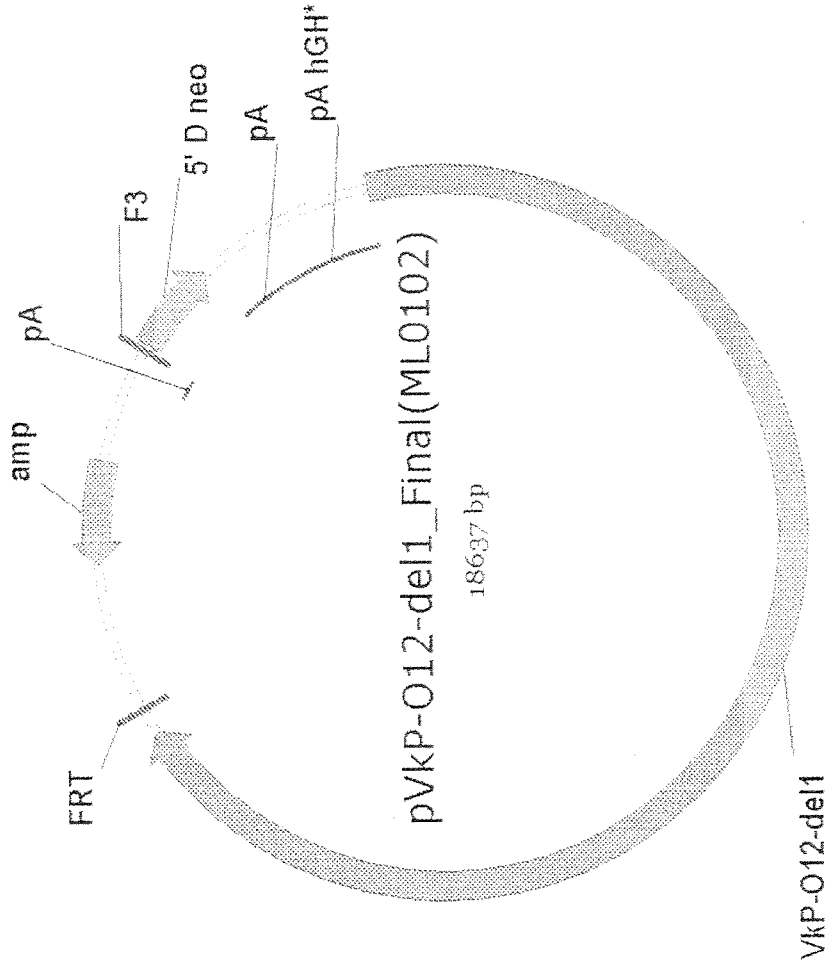
A



-61/72-

Figure 20 contd

B



-62/72-

Figure 20 contd

C

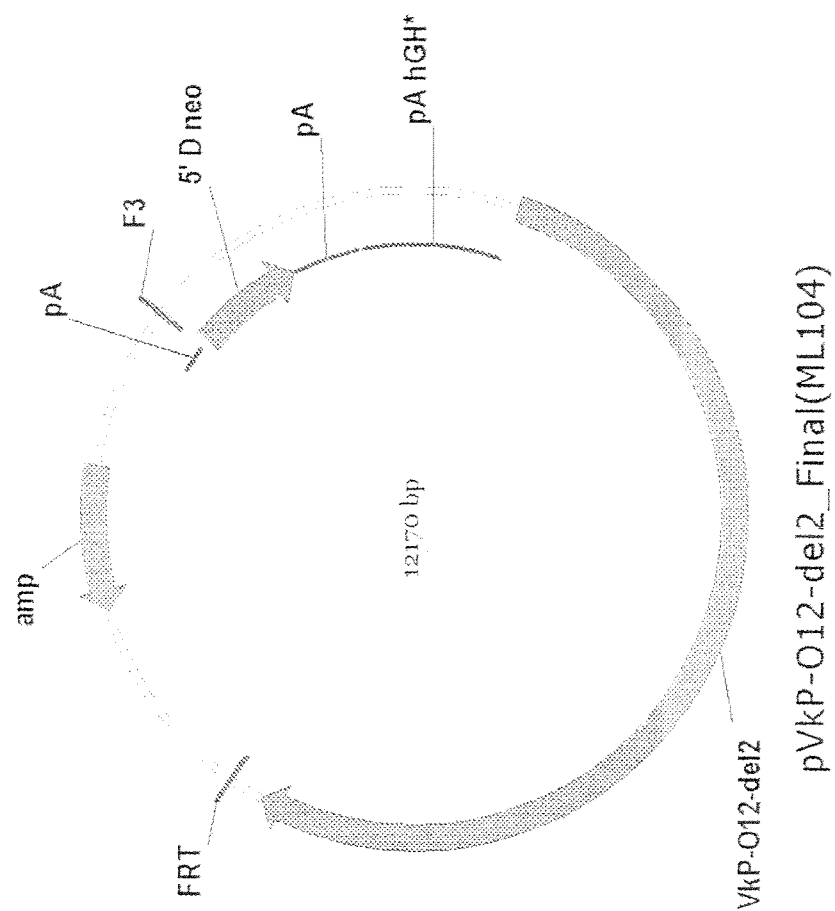
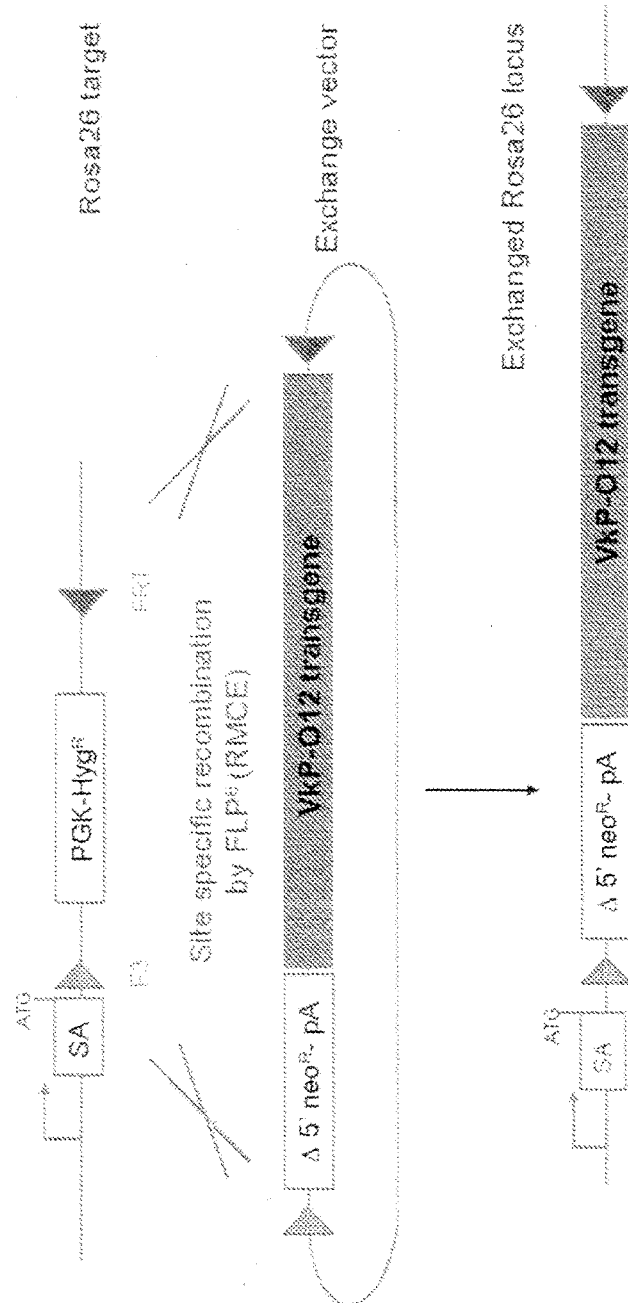


Figure 21

A



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Figure 21 contd

B

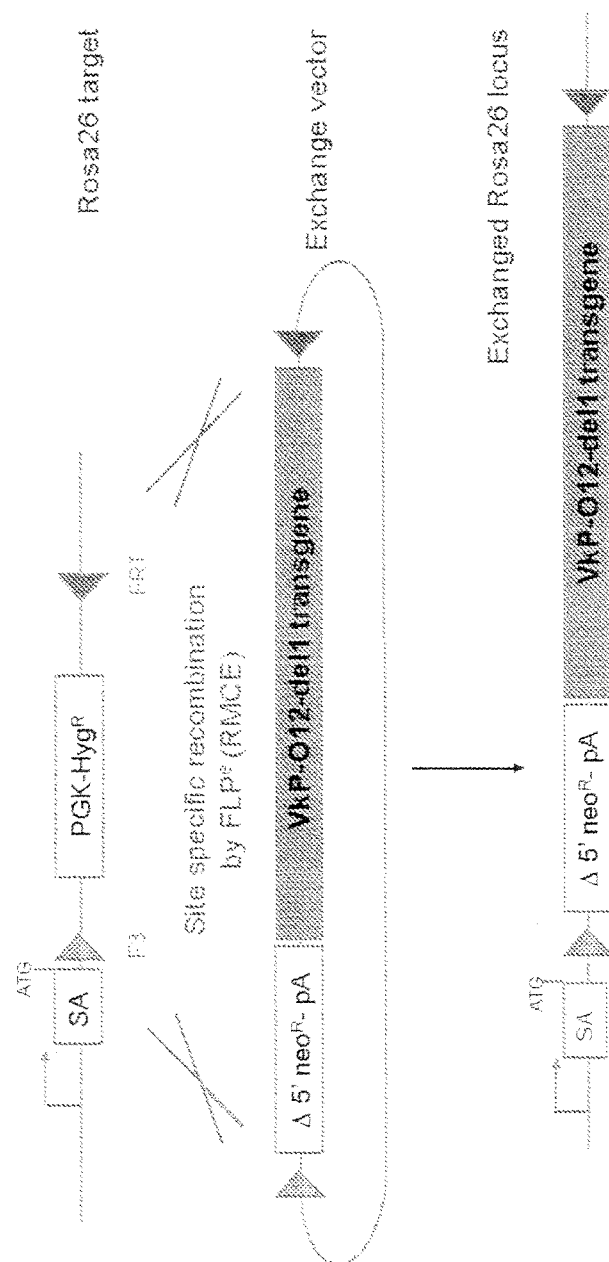
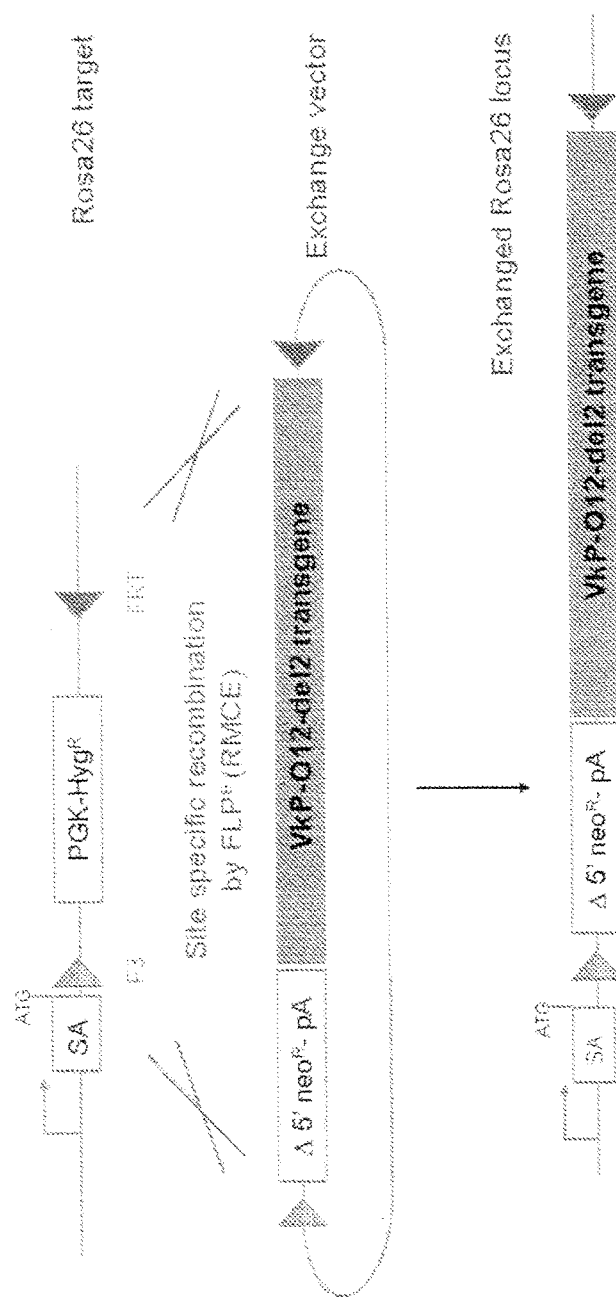


Figure 21 contd -65/72-

C



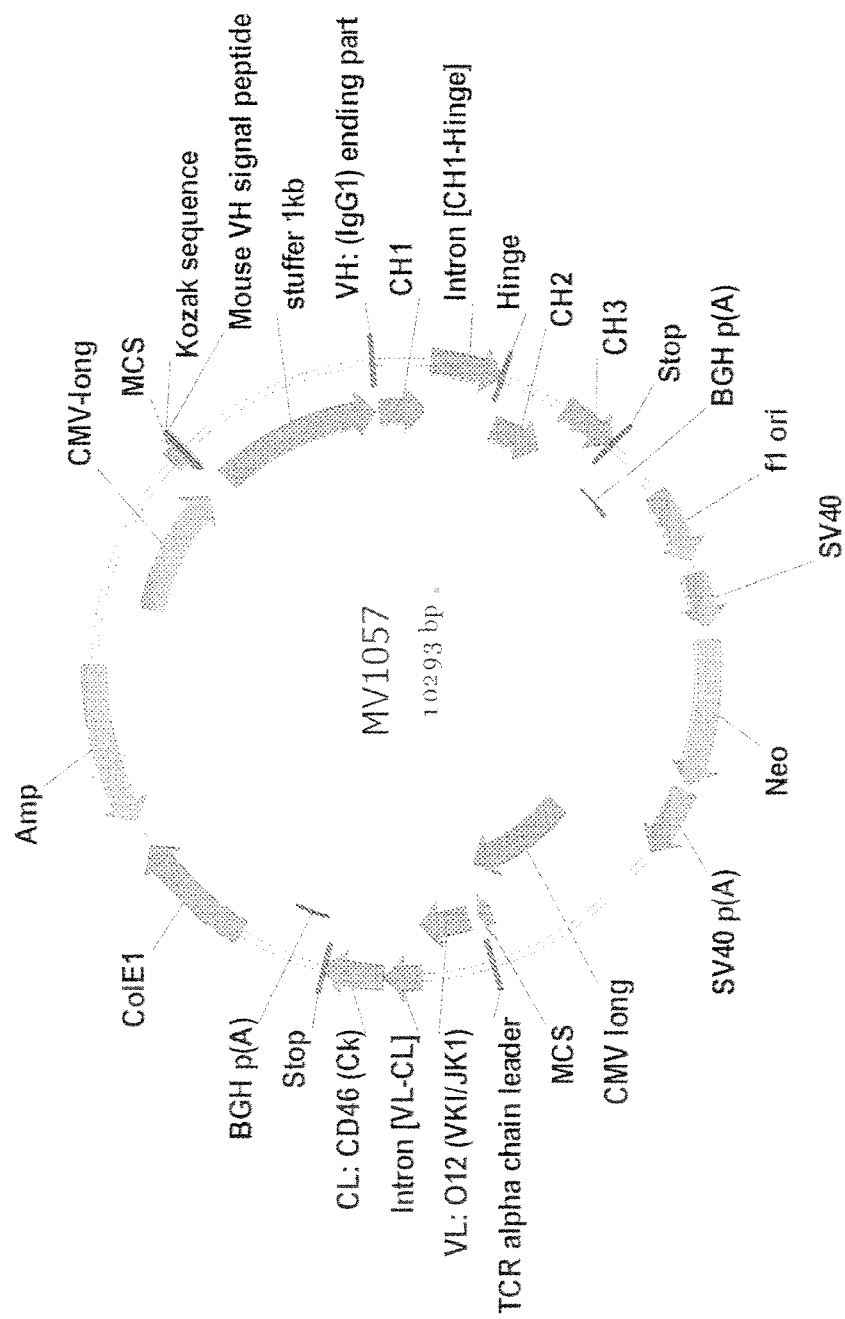


Figure 23

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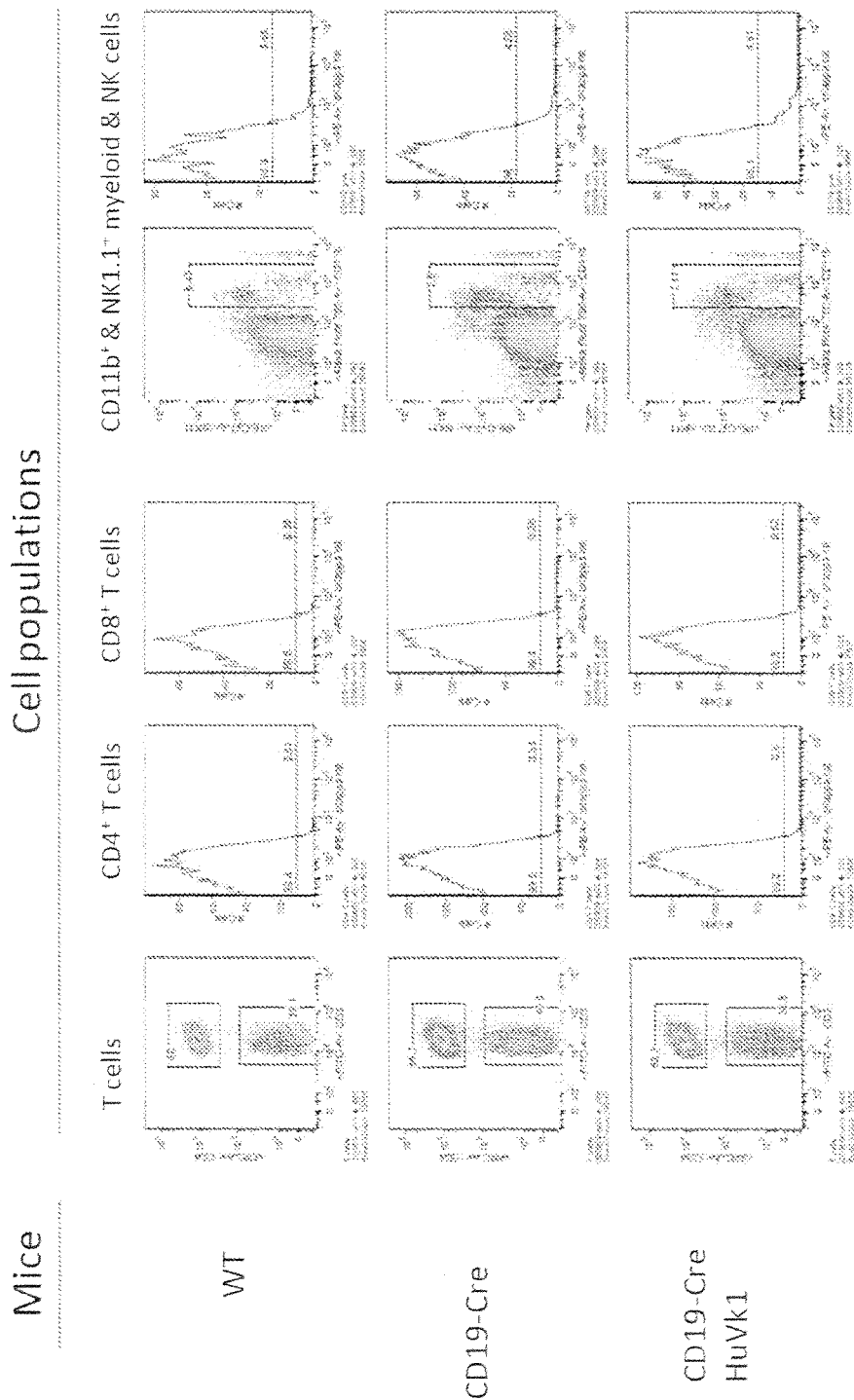


Figure 24

-68/72-

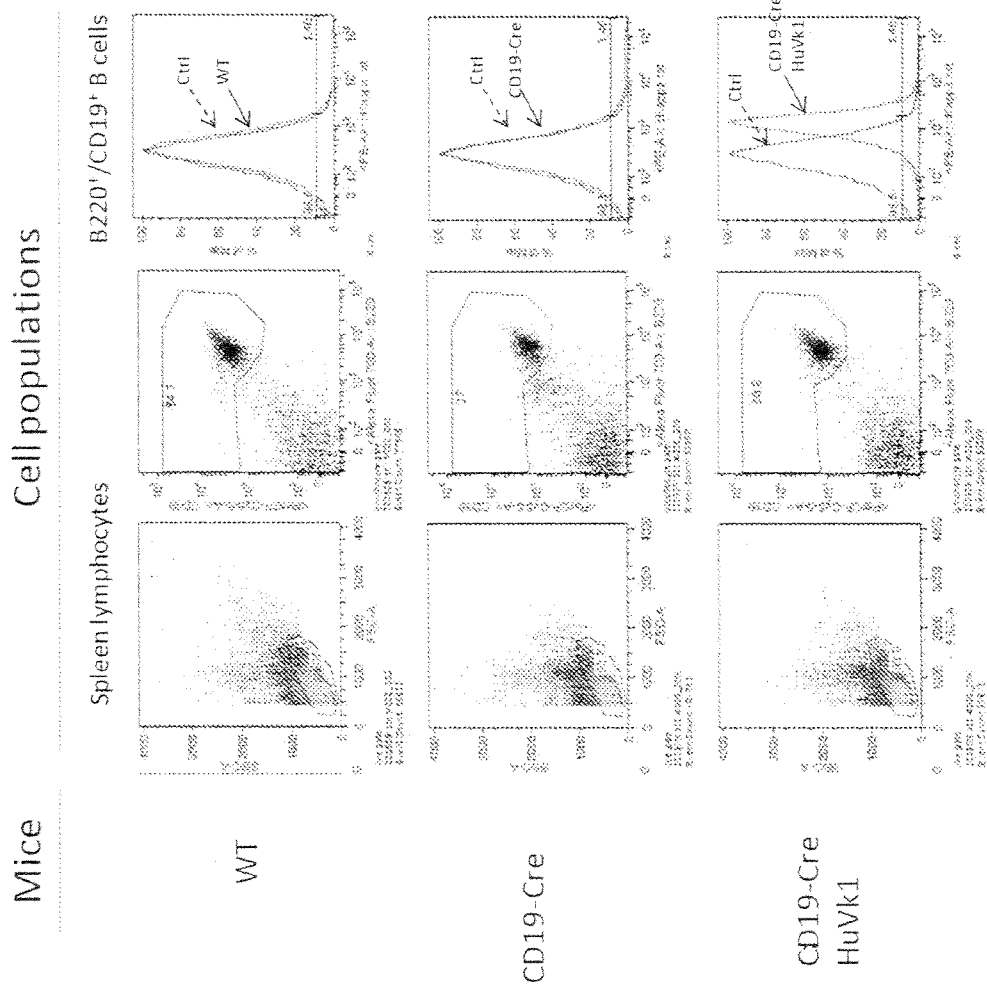


Figure 25

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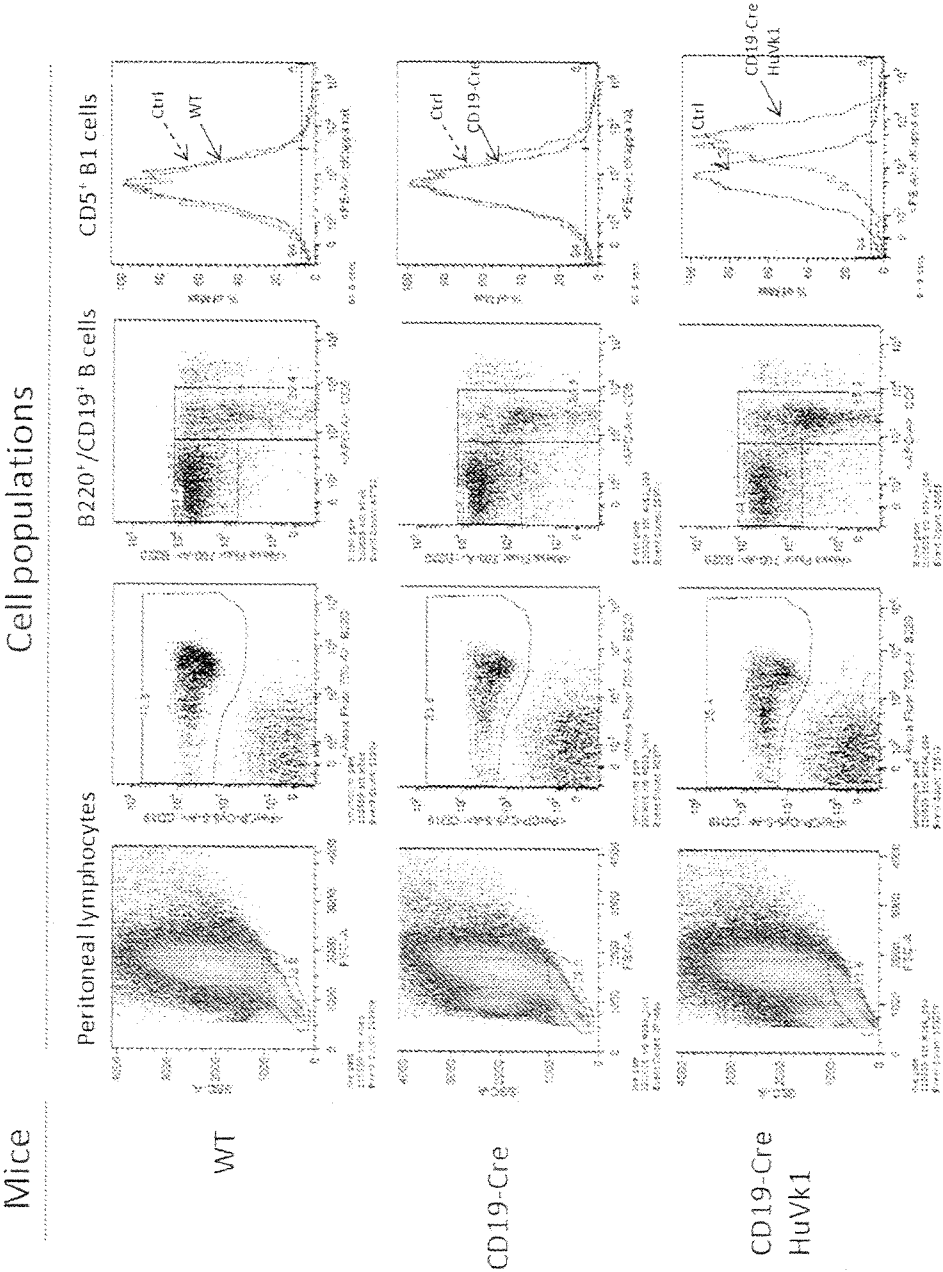


Figure 26

A

-70/72-

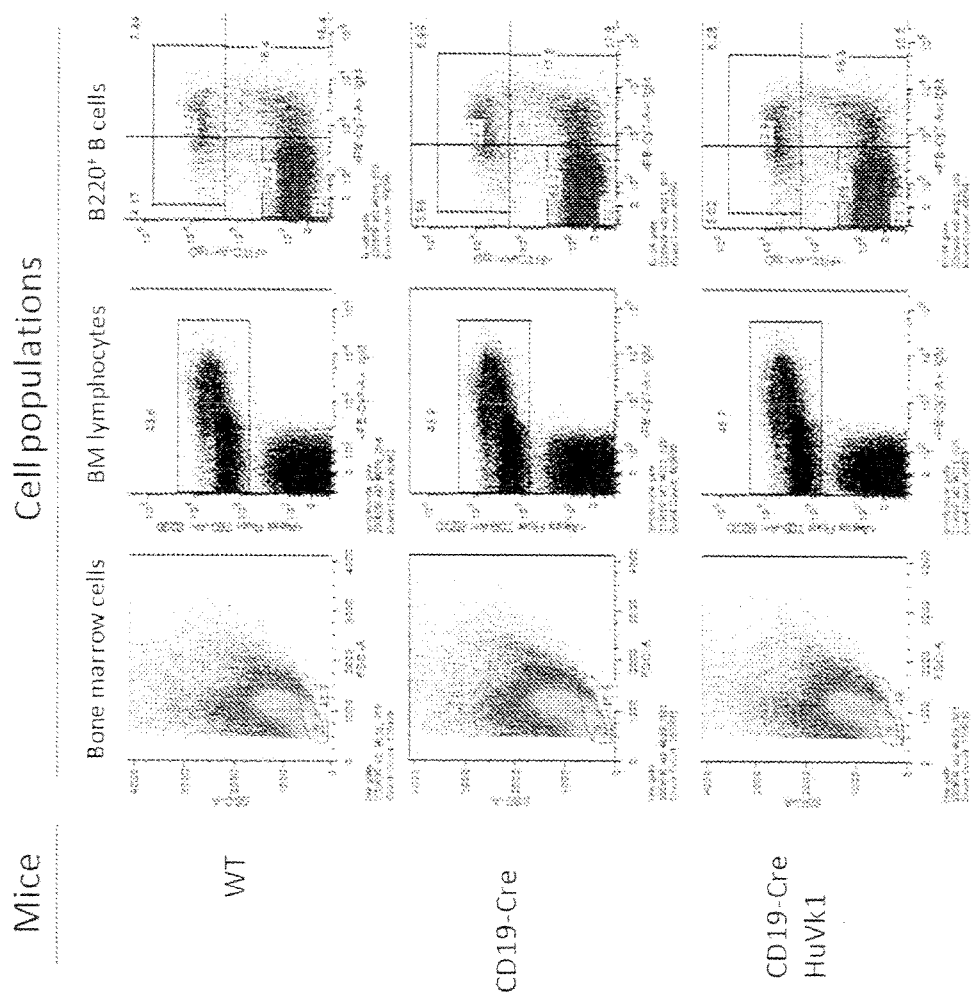


Figure 26 CONTD

B

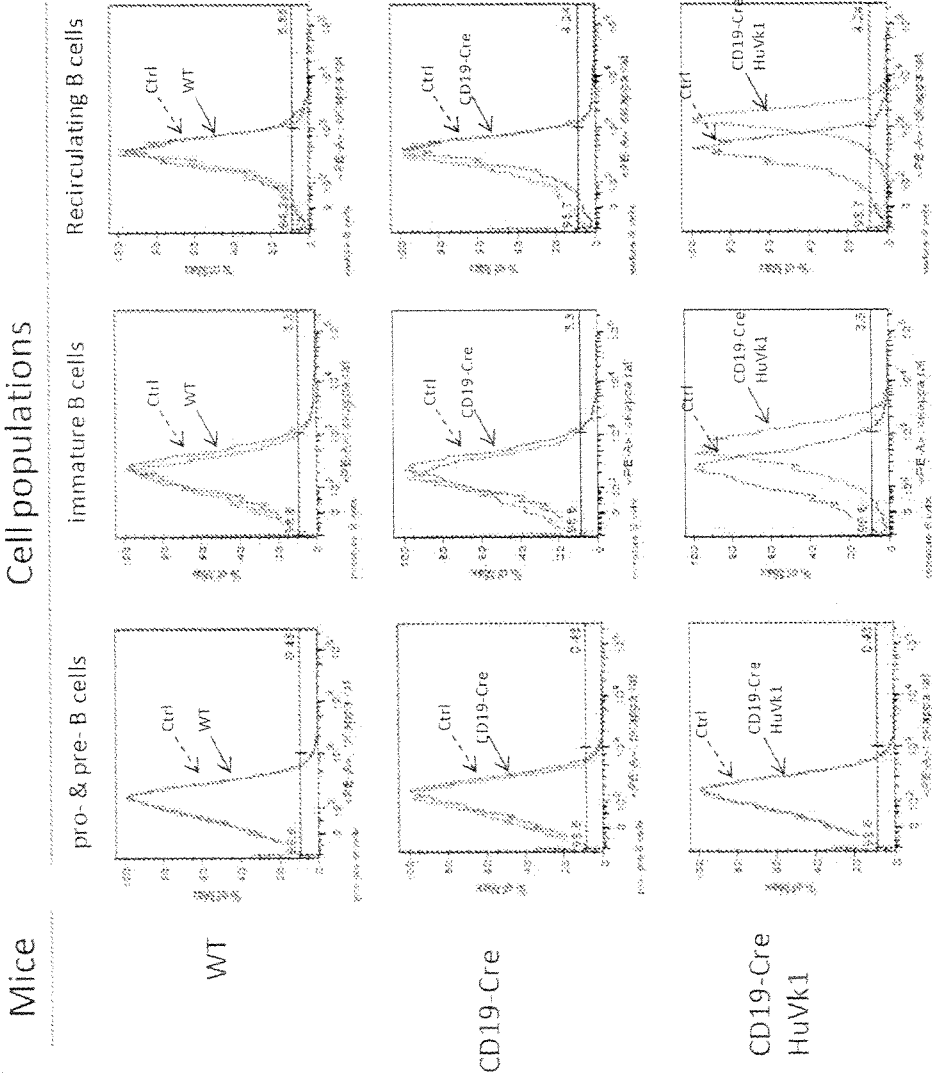


Figure 27

-72/72-

