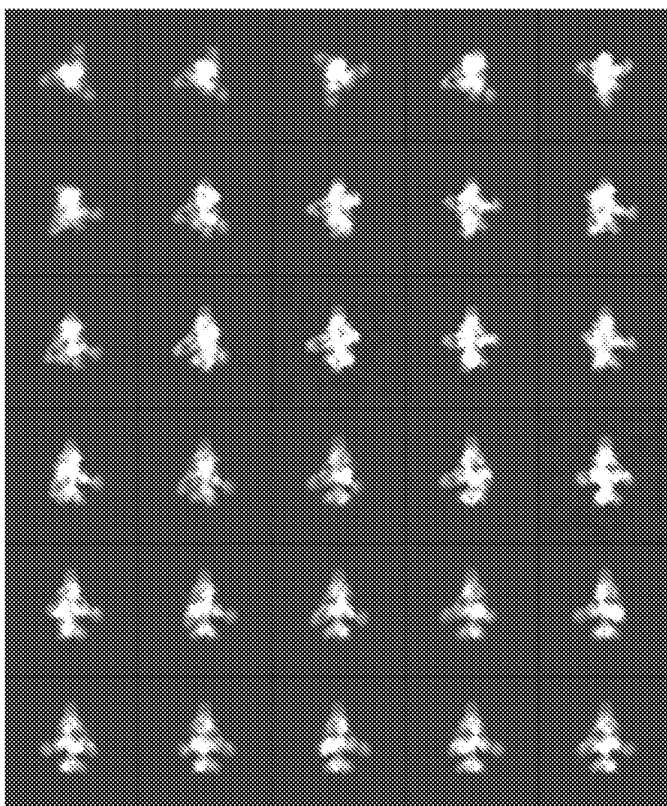


FIG. 1A

2D projections from a
postfusion gB structure

**FIG. 1B**

2D class averages

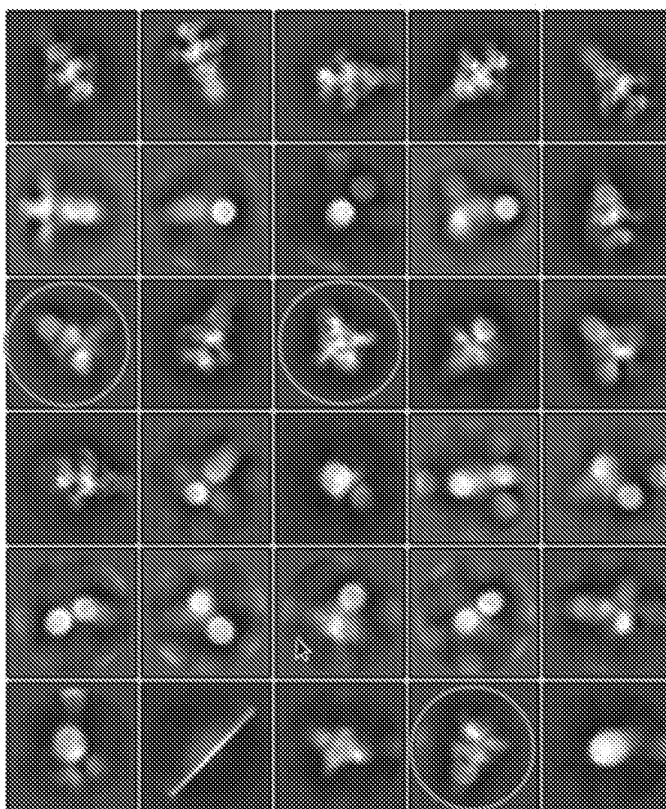


FIG. 2

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAAHRSR GSVSQRVTSS
MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAAHRSR GSVSQRVTSS

61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED

121 LDEGIMVVYK RN/VAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
LDEGIMVVYK RN/VAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN

181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTV K DQWHSRGSTW
SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW

241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF

301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA

361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV

421 FETTGGVLVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
FETTGGVLVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV

481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPIAAR
YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPIAAR

541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE

601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS S ISTVDSMIA LDIDPLENTD
ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS S ISTVDSMIA LDIDPLENTD

661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG

721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM

781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY

841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGT QDKGQ KPNLLDRLRH RKNGYRHLKD
TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD

901 SDEEENV
SDEEENV

FIG. 3A

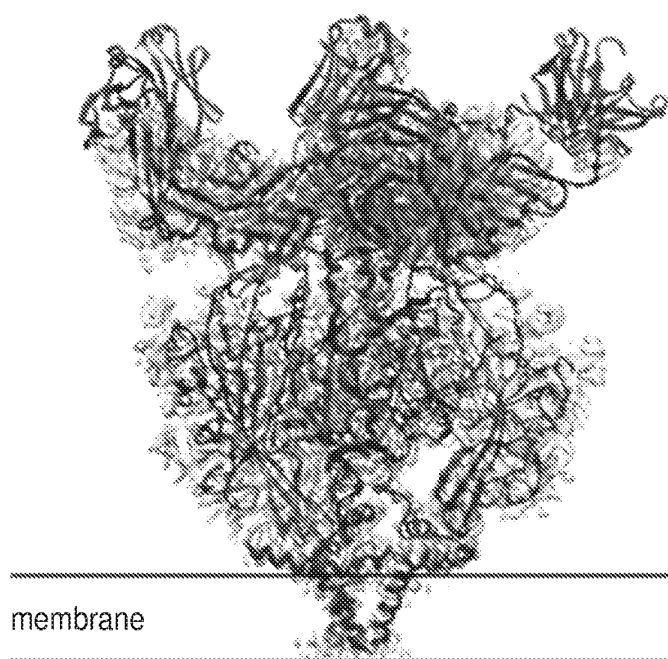


FIG. 3B

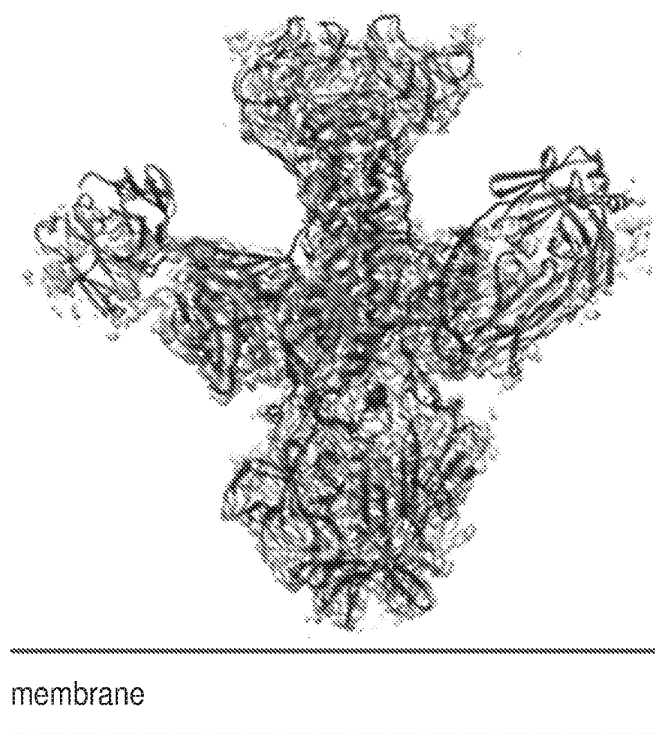


FIG. 4A

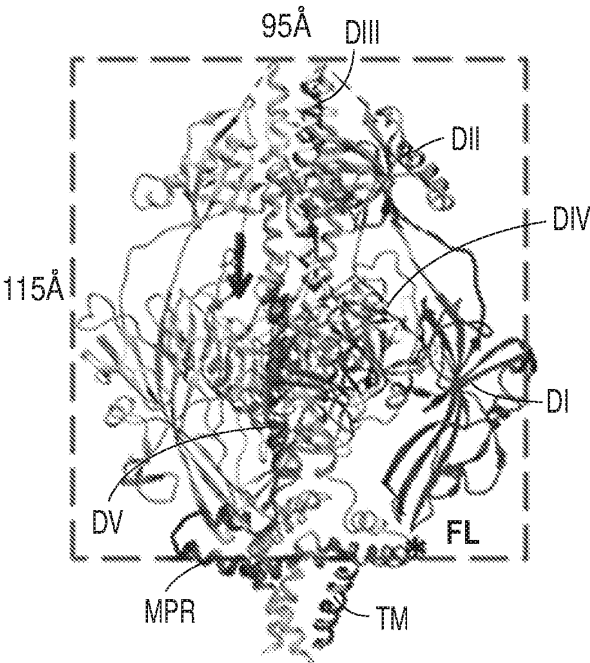


FIG. 4B

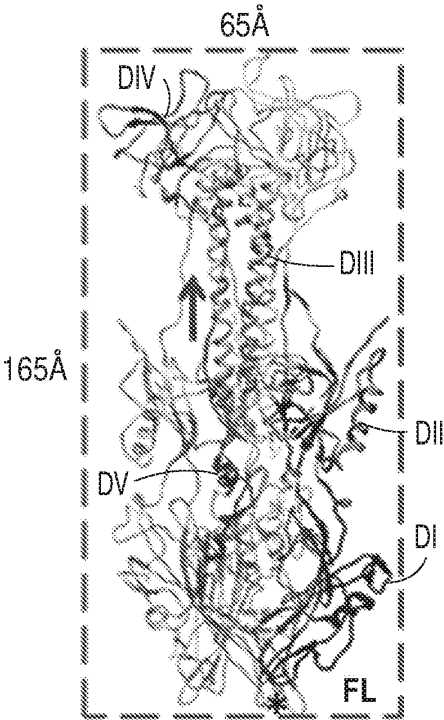


FIG. 5A

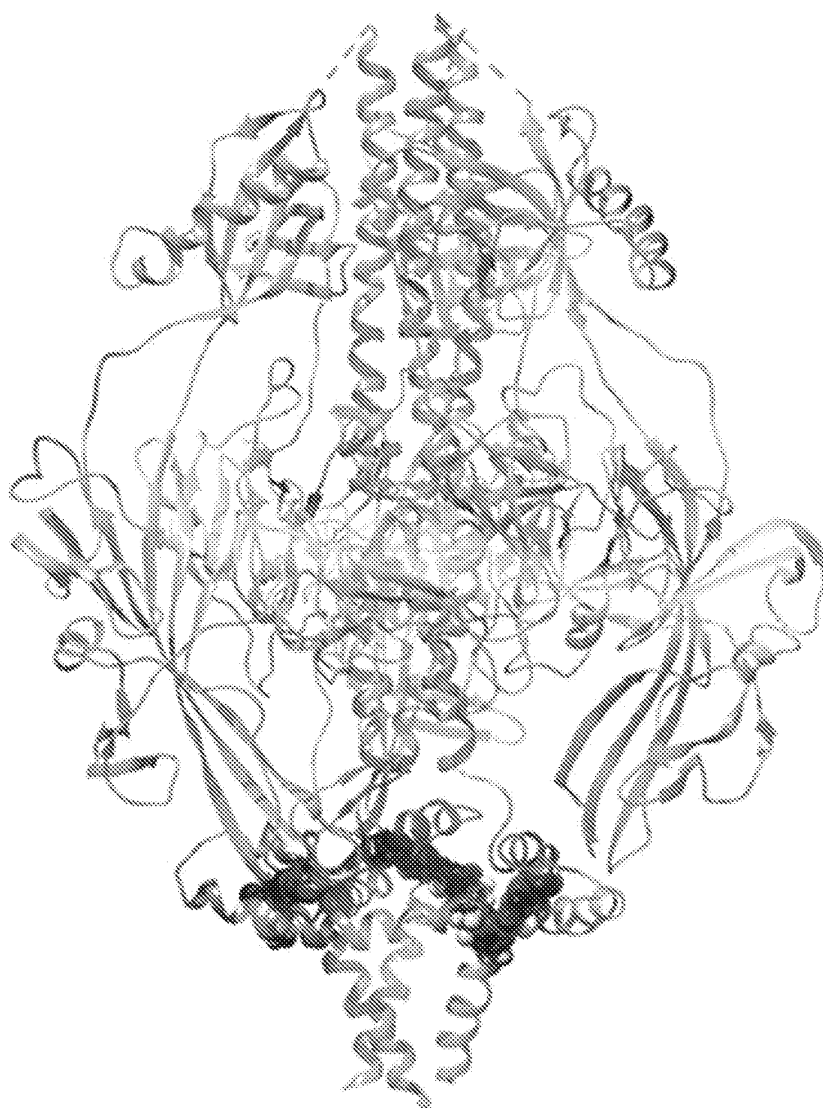


FIG. 5B

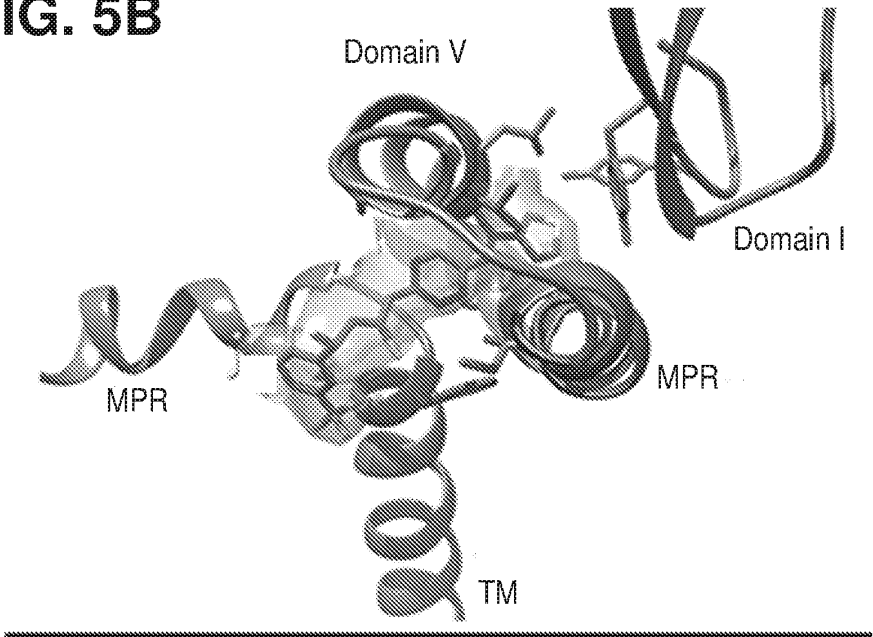


FIG. 5C

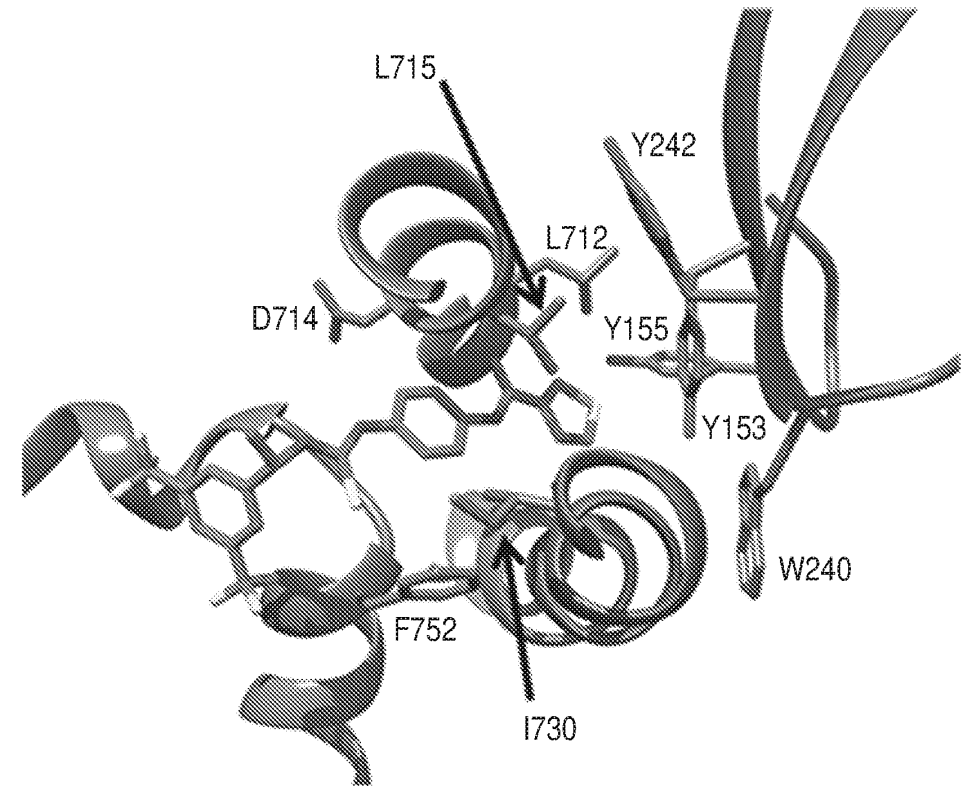


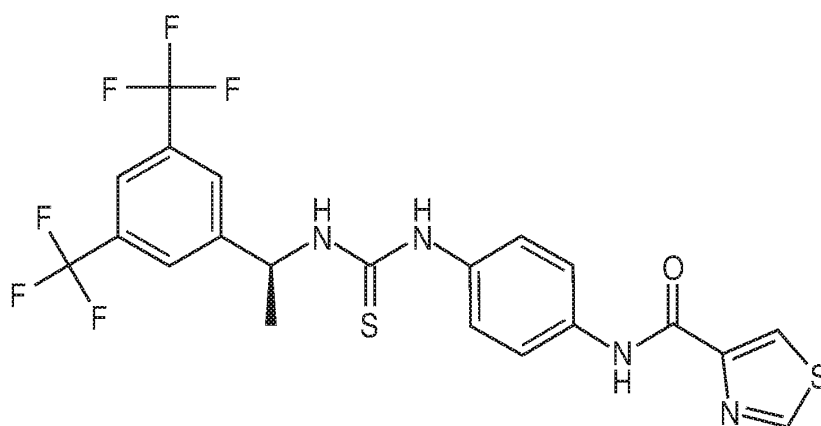
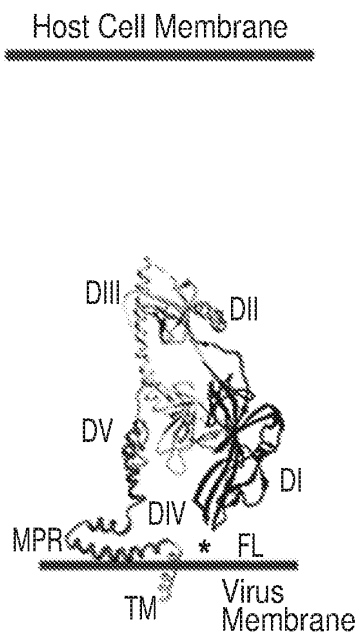
FIG. 5D

FIG. 6A



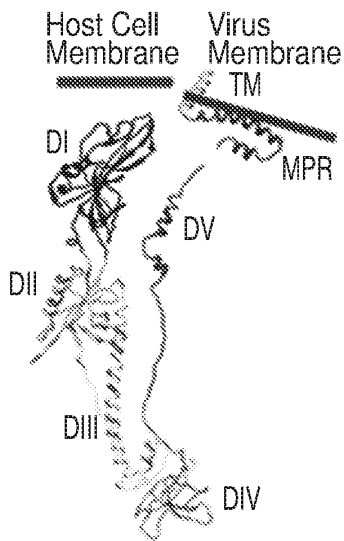
Prefusion

FIG. 6B



Extended
Intermediate

FIG. 6C



Postfusion

FIG. 7A

FIG. 7B

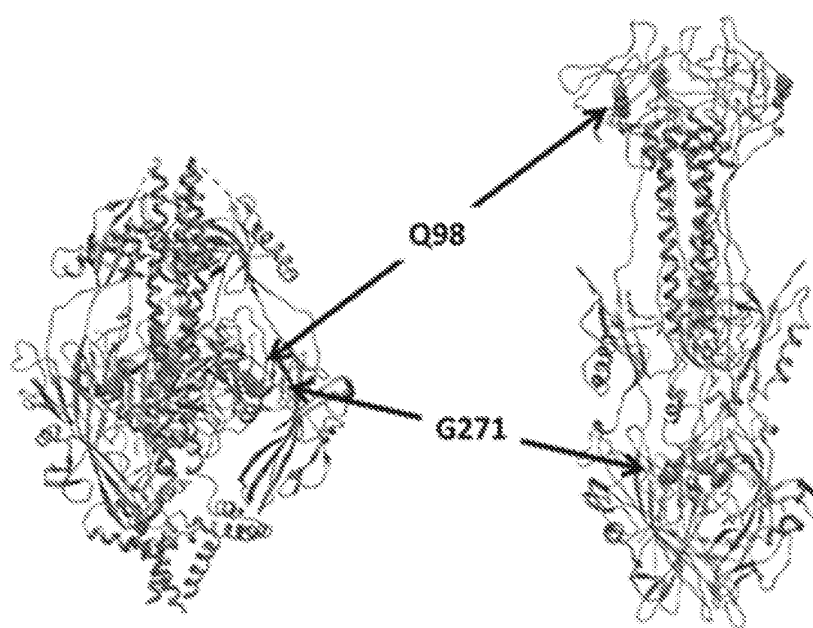
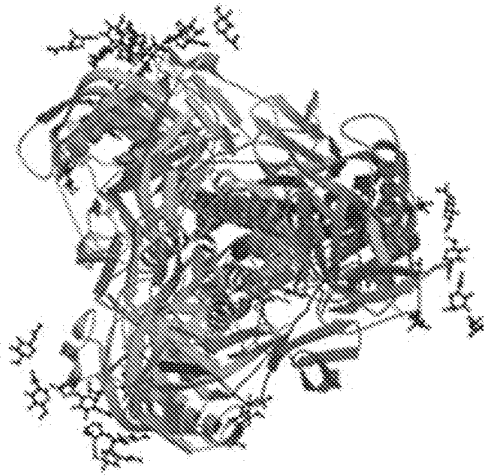


FIG. 8

>5CXF:A|PDBID|CHAIN|SEQUENCE

YGDVVG VNTTKYPYRVCSMAQGTDLIRFERNICTSMKPINEDLDEGIMVVYKRNIVAHTFKVRVYQKVLTFRRSYAGHR
TTYLLGSNTEYVAPPMWEIHHINKFAQCYSSYSRVIGGTVFVAYHRDSHENKTMQLIPDDYSNTHSTRYVTVKDQWHSRG
STATHRETCNLNCMLTITTARSKYPYHFFATSTGDVVYISPFYNGTNRNASYFGENADKFFIFPNYTIVSDFGRPNAAPE
THRLVAFLERADSVISWDIQDEKNVTCQLTFWEASERTIRSEAEDSYHFSSAKMTATFLSKKQEVNMSDSALDCVRDEAI
NKLQQIFNTSYNQTYEKYGNVSVFETSGGLVVFVWQGQIKQSLVELERLANRSSLNITHDDDDKSTSDNNTTHLSSMESVH
NLVYAQLQFTYDTLRGYINRALAQIAEAWCVDQRRTELVFKELSKINPSAILSAIYNKPIAARFMGDVGLGLASCVTINQT
SVKVL RDMNVKESPGRCYSRPVVIFNFANSSYVQYGQLGEDNEILLGNHRTEECQLPSLKIFIAGNSAYEYVDYLFKRMI
DLSSISTVDSMIALDIDPLENTDFRVLELYSQKELRSSNVFDLEEIMREFNSYKQRVKYVEDKVVDPLPP (SEQ ID NO: 107)

>5CXF:B|PDBID|CHAIN|SEQUENCE

YGDVVG VNTTKYPYRVCSMAQGTDLIRFERNICTSMKPINEDLDEGIMVVYKRNIVAHTFKVRVYQKVLTFRRSYAGHR
TTYLLGSNTEYVAPPMWEIHHINKFAQCYSSYSRVIGGTVFVAYHRDSHENKTMQLIPDDYSNTHSTRYVTVKDQWHSRG
STATHRETCNLNCMLTITTARSKYPYHFFATSTGDVVYISPFYNGTNRNASYFGENADKFFIFPNYTIVSDFGRPNAAPE
THRLVAFLERADSVISWDIQDEKNVTCQLTFWEASERTIRSEAEDSYHFSSAKMTATFLSKKQEVNMSDSALDCVRDEAI
NKLQQIFNTSYNQTYEKYGNVSVFETSGGLVVFVWQGQIKQSLVELERLANRSSLNITHDDDDKSTSDNNTTHLSSMESVH
NLVYAQLQFTYDTLRGYINRALAQIAEAWCVDQRRTELVFKELSKINPSAILSAIYNKPIAARFMGDVGLGLASCVTINQT
SVKVL RDMNVKESPGRCYSRPVVIFNFANSSYVQYGQLGEDNEILLGNHRTEECQLPSLKIFIAGNSAYEYVDYLFKRMI
DLSSISTVDSMIALDIDPLENTDFRVLELYSQKELRSSNVFDLEEIMREFNSYKQRVKYVEDKVVDPLPP (SEQ ID NO: 108)

>5CXF:C|PDBID|CHAIN|SEQUENCE

YGDVVG VNTTKYPYRVCSMAQGTDLIRFERNICTSMKPINEDLDEGIMVVYKRNIVAHTFKVRVYQKVLTFRRSYAGHR
TTYLLGSNTEYVAPPMWEIHHINKFAQCYSSYSRVIGGTVFVAYHRDSHENKTMQLIPDDYSNTHSTRYVTVKDQWHSRG
STATHRETCNLNCMLTITTARSKYPYHFFATSTGDVVYISPFYNGTNRNASYFGENADKFFIFPNYTIVSDFGRPNAAPE
THRLVAFLERADSVISWDIQDEKNVTCQLTFWEASERTIRSEAEDSYHFSSAKMTATFLSKKQEVNMSDSALDCVRDEAI
NKLQQIFNTSYNQTYEKYGNVSVFETSGGLVVFVWQGQIKQSLVELERLANRSSLNITHDDDDKSTSDNNTTHLSSMESVH
NLVYAQLQFTYDTLRGYINRALAQIAEAWCVDQRRTELVFKELSKINPSAILSAIYNKPIAARFMGDVGLGLASCVTINQT
SVKVL RDMNVKESPGRCYSRPVVIFNFANSSYVQYGQLGEDNEILLGNHRTEECQLPSLKIFIAGNSAYEYVDYLFKRMI
DLSSISTVDSMIALDIDPLENTDFRVLELYSQKELRSSNVFDLEEIMREFNSYKQRVKYVEDKVVDPLPP (SEQ ID NO: 109)

FIG. 9

>HAN13 gil242345614lgb|GQ221973.1l:81988-84705 Human
herpesvirus 5 strain HAN13, complete genome reverse complement
MESRIWCLVVCVNLCIVCLGAAVSSSSTSHATSSAHNGSHTSRTTSAQTRSVSSQHVTSS
EAVSHRANETIYNTTLKYGDVVGVTTKYPYRVCSMAQGTDLIRFERNIVCTPMKPINED
LDEGIMVVYKRNIVAHTFKVRVYQKVLTFRRSYAYIHTTYLLGSNTEYVAPPMWEIHHIN
RHSQCYSSYSRVIAGTVFVAYHRDSYENKTMQLMLDDYSNTHSTRYVTVKDQWHSRGSTW
LYRETCNLNCMTITTARSKYPYHFFATSTGDVVDISPFYNGTNRNTSYFGENADKFFIF
PNYTIVSDFGRANSAPETHRLVAFLERADSVISWDIQDEKNVTCQLTFWEASERTIRSEA
EDSYHFSSAKMTATFLSKKQEVNMSDPVLDCVRDQALNKLQQIFNASYNQTYEKYGNVSV
FETTGGLVVFWQGIKQKSLELERLANSSGVNSTRRTKRSTGNTTTLSESESVRNVLYA
QLQFTYDTLRSYINRALAQIAEAWCVDQRRRTLEVFKELSKINPSAILSAIYNKPIAARFM
GDVLGLASCVTINQTSVKVLRDMNVKESPGRCYSRPVVIFNFVNSSYVQYGQLGEDNEIL
LGNHRTEECQFPKIFIAGNSAYEYVDYLFKRMIDLSSISTVDSMIALDIDPLENTDFR
VLELYSQKELRSSNVFDLEEIMREFNSYKQRVKYVEDKVVDPLPPYLKGLDDLMSGLGAA
GKAVGVAIGAVGGAVASVVEGVATFLKNPFGAFTIILVAIAVVIIIYLIYTRQRRLCMQP
LQNLFPYLVSAADGTTVTSGNTKDTSLQAPPSYEEESVYNSGRKGPGPPSSDASTAAPPYTN
EQAYQMLLALARLDAEQRAQQNGTDSLQGQTGTQDKGQKPNLLDRLRHRKNGYRHLKDSD
EEENV (SEQ ID NO: 110)

>VR1814 gil270355759lgb|GU179289.1l:81925-84642 Human
herpesvirus 5 strain VR1814, complete genome reverse complement
MESRIWCLVVCVNLCIVCLGAVVSSSSTSHATSSAHNGSHTSRTTSAQTRSVSSQHVTSS
EAVSHRANETIYNTTLKYGDVVGVTTKYPYRVCSMAQGTDLIRFERNIVCTPMKPINED
LDEGIMVVYKRNIVAHTFKVRVYQKVLTFRRSYAYIHTTYLLGSNTEYVAPPMWEIHHIN
RHSQCYSSYSRVIAGTVFVAYHRDSYENKTMQLMLDDYSNTHSTRYVTVKDQWHSRGSTW
LYRETCNLNCMTITTARSKYPYHFFATSTGDVVDISPFYNGTNRNTSYFGENADKFFIF
PNYTIVSDFGRANSAPETHRLVAFLERADSVISWDIQDEKNVTCQLTFWEASERTIRSEA
EDSYHFSSAKMTATFLSKKQEVNMSDPVLDCVRDQALNKLQQIFNASYNQTYEKYGNVSV
FETTGGLVVFWQGIKQKSLELERLANSSGVNSTRRTKRSTGNTTTLSESESVRNVLYA
QLQFTYDTLRSYINRALAQIAEAWCVDQRRRTLEVFKELSKINPSAILSAIYNKPIAARFM
GDVLGLASCVTINQTSVKVLRDMNVKESPGRCYSRPVVIFNFVNSSYVQYGQLGEDNEIL
LGNHRTEECQFPKIFIAGNSAYEYVDYLFKRMIDLSSISTVDSMIALDIDPLENTDFR
VLELYSQKELRSSNVFDLEEIMREFNSYKQRVKYVEDKVVDPLPPYLKGLDDLMSGLGAA
GKAVGVAIGAVGGAVASVVEGVATFLKNPFGAFTIILVAIAVVIIIYLIYTRQRRLCMQP
LQNLFPYLVSAADGTTVTSGNTKDTSLQAPPSYEEESVYNSGRKGPGPPSSDASTAAPPYTN
EQAYQMLLALARLDAEQRAQQNGTDSLQGQTGTQDKGQKPNLLDRLRHRKNGYRHLKDSD
EEENV (SEQ ID NO: 111)

FIG. 10

Original HCMV gB (Towne) sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVNNTTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTQCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGVLVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPPIAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSL DGTGTQDKGQ KPNLLDRLRH RKNGYRHLLKD
901 SDEEENV (SEQ ID NO: 1)

gB-001 Q98C, G271C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVNNTTKYP YRVCSMACGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST CDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTQCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGVLVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPPIAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSL DGTGTQDKGQ KPNLLDRLRH RKNGYRHLLKD
901 SDEEENV (SEQ ID NO: 2)

Fig. 10 continued

FIG. 10 (Continued)

gB-002 Q98C, I653C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMACGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTRK STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDCDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLOM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNQYRHLKD
901 SDEEENV (SEQ ID NO: 3)

gB-003 G99C, A267C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQCT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFCTST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTRK STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLOM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNQYRHLKD
901 SDEEENV (SEQ ID NO: 4)

FIG. 10 (Continued)

gB-004 T100C, A267C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGC DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFCTST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 5)

gB-005 T100C, S269C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGC DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATCT GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 6)

FIG. 10 (Continued)**gB-006 T100C, L651C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGC DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA CDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 7)

gB-007 D217C, F584C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDCYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNCANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 8)

FIG. 10 (Continued)**gB-008 Y218C, A585C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDCSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFCNSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 9)

gB-009 S219C, D654C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYCN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDICPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 10)

FIG. 10 (Continued)

gB-010 N220C, D652C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSC THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LCIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 11)

gB-011 T221C, D652C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN CHSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LCIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 12)

FIG. 10 (Continued)**gB-012 W240C, G718C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTC
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSCLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 13)

gB-013 Y242C, K710C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LCRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLC GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 14)

FIG. 10 (Continued)**gB-014 Y242C, D714C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LCRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDCLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 15)

gB-015 S269C, I653C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATCT GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDCDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 16)

FIG. 10 (Continued)**gB-016 G271C, P614C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST CDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLCSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 17)

gB-017 S367C, L499C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFCSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRACA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 18)

FIG. 10 (Continued)

gB-018 T372C, W506C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MCATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEACCVDDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KORVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 19)

gB-019 F541C, Q669C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 CMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSCK ELRSSNVFDL EEIMREFNSY KORVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 20)

FIG. 10 (Continued)

gB-020 L548C, A650C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGCAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIC LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 21)

gB-021 A549C, I653C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLCS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDCDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 22)

FIG. 10 (Continued)**gB-022 S550C, D652C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAC CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LCDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 23)

gB-023 G604C, F661C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLCNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 CRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 24)

FIG. 10 (Continued)

gB-024 N605C, E665C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGCHRTTE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLCLYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 25)

gB-025 R607C, S675C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHCTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSCNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 26)

FIG. 10 (Continued)**gB-026 T608C, D679C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRCEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFCL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 27)

gB-027 E609C, F678C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTCE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVCDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 28)

FIG. 10 (Continued)**gB-028 R673C, S674C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELCCSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 29)

gB-029 N676C, V677C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSCCFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 30)

FIG. 10 (Continued)**gB-030 L680C, E681C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDC CEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 31)

gB-031 I683C, M684C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EECCREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 32)

FIG. 10 (Continued)

gB-032 F687C, N688C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMRECCSY QORVKYVEDK VVDPLPPYK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 33)

gB-033 Y690C, K691C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSC QORVKYVEDK VVDPLPPYK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 34)

FIG. 10 (Continued)**gB-034 K695C, K724C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVCYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGCAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 35)

gB-035 T746C, F747C

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVACCLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 36)

Fig. 10 continued

FIG. 10 (Continued)**gB-036 K749C, N750C**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLCC PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 37)

gB-037 K670L

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQL ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 38)

FIG. 10 (Continued)**gB-038 K670F**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPIAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQF ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 39)

gB-039 R673L

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPIAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELLSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 40)

FIG. 10 (Continued)**gB-040 R673F**

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELFSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 41)

gB-041 K691L

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY LQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 42)

FIG. 10 (Continued)

gB-042 K691F

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY FORVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 43)

gB-043 M96C, D660C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTC
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 47)

FIG. 10 (Continued)

gB-044 Q98C, N658C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMACGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLECTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 48)

gB-045 T100C, R258C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGC DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTACSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 49)

Fig. 10 continued

FIG. 10 (Continued)

gB-046 T100C, L656C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGC DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPCENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 50)

gB-047 T100C, N658C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGC DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLECTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 51)

FIG. 10 (Continued)

gB-048 I117C, T406C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPCNED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNCSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 52)

gB-049 I117C, S407C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPCNED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNCSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 53)

FIG. 10 (Continued)

gB-050 Y153C, L712C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSCAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GCDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 54)

gB-051 L162C, M716C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LCGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLCSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 55)

Fig. 10 continued

FIG. 10 (Continued)

gB-052 D217C, S587C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDCYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANCSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 56)

gB-053 D217C, Y589C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDCYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSCV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 57)

FIG. 10 (Continued)

gB-054 S219C, F584C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYCN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNCANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 58)

gB-055 S219C, A585C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYCN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFCNSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 59)

FIG. 10 (Continued)

gB-056 S219C, N586C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYCN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFACSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 60)

gB-057 N220C, T659C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSC THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENCD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 61)

FIG. 10 (Continued)

gB-058 S223C, T659C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THCTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENCD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 62)

gB-059 W240C, A732C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTC
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GCVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 63)

FIG. 10 (Continued)

gB-060 W240C, G735C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTC
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGCAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 64)

gB-061 Y242C, V728C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LCRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGCAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 65)

FIG. 10 (Continued)

gB-062 Y242C, G731C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LCRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGLLVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI CAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 66)

gB-063 R258C, L656C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTACSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGLLVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPCENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 67)

FIG. 10 (Continued)

gB-064 S269C, L656C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATCT GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPCENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 68)

gB-065 S269C, N658C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATCT GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLECTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 69)

FIG. 10 (Continued)

gB-066 D272C, P614C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GCVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLCSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 70)

gB-067 V273C, V629C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDCVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYCD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 71)

FIG. 10 (Continued)

gB-068 W349C, A650C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFCE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIC LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 72)

gB-069 S367C, A500C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFCSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALC QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 73)

FIG. 10 (Continued)

gB-070 S367C, A503C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFCSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QICEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 74)

gB-071 K370C, Q501C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAC MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA CIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 75)

FIG. 10 (Continued)

gB-072 K522C, I683C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SCINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EECMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 76)

gB-073 I523C, I683C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKCNPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EECMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 77)

FIG. 10 (Continued)

gB-074 I523C, M684C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKCNPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEICREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 78)

gB-075 N524C, M684C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKICPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEICREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 79)

FIG. 10 (Continued)

gB-076 P525C, E681C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINCSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL CEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 80)

gB-077 R540C, L680C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAC
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDC EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 81)

FIG. 10 (Continued)

gB-078 F541C, L680C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 CMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDC EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 82)

gB-079 L548C, P655C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGCAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDCLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 83)

FIG. 10 (Continued)

gB-080 A549C, N658C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLCS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLECTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 84)

gB-081 S550C, P655C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAC CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDCLENED
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 85)

FIG. 10 (Continued)

gB-082 S550C, E657C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAC CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLCNTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 86)

gB-083 Q591C, S668C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV CYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYCQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 87)

FIG. 10 (Continued)

gB-084 L603C, Y667C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILCGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELCSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 88)

gB-085 G604C, L672C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLCNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ECRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 89)

FIG. 10 (Continued)

gB-086 R607C, N688C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHCTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFCSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 90)

gB-087 T608C, Q692C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRCEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KCRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 91)

FIG. 10 (Continued)

gB-088 E609C, K691C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTCE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY QQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 92)

gB-089 E610C, S674C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTCE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRCSNVFDL EEIMREFNSY QQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 93)

FIG. 10 (Continued)

gB-090 E610C, S675C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEC CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSCNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSL D GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 94)

gB-091 Q612C, V663C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CCLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRCLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSL D GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 95)

FIG. 10 (Continued)

gB-092 V737C, F755C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAAHRSR GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVNNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTRK STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGACASV VEGVATFLKN PFGACTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 96)

gB-093 V741C, A754C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAAHRSR GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVNNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTRK STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV CEGVATFLKN PFGCFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 97)

FIG. 10 (Continued)

gB-094 V741C, F755C sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KORVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV CEGVATFLKN PFGACTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 98)

gB-095 D679S sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFSL EEIMREFNSY KORVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 99)

FIG. 10 (Continued)

gB-096 D679N sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGLLVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFNL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 100)

gB-097 E682S sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGLLVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL ESIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGP GPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 101)

Fig. 10 continued

FIG. 10 (Continued)

gB-098 E682Q sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EQIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 102)

gB-099 E686S sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMRSFNYSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLD GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 103)

Fig. 10 continued

FIG. 10 (Continued)

gB-100 E686Q sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMRQFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 104)

gB-101 N118P sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSTRG TSATHSHHSS HTTSAHSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVTNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPIPED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE CQLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVDSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEESVYN SGRKGPGPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 105)

Fig. 10 continued

FIG. 10 (Continued)

gB-102 D646P sequence

1 MESRIWCLVV CVNLCIVCLG AAVSSSSSTRG TSATHSHHSS HTTSAAHRSRS GSVSQRVTSS
61 QTVSHGVNET IYNTTLKYGD VVGVNNTKYP YRVCSMAQGT DLIRFERNIV CTSMKPINED
121 LDEGIMVVYK RNIVAHTFKV RVYQKVLTFR RSYAYIHTTY LLGSNTEYVA PPMWEIHHIN
181 SHSQCYSSYS RVIAGTVFVA YHRDSYENKT MQLMPDDYSN THSTRYVTVK DQWHSRGSTW
241 LYRETCNLNC MVTITTARSK YPYHFFATST GDVVDISPFY NGTNRNASYF GENADKFFIF
301 PNYTIVSDFG RPNSALETHR LVAFLERADS VISWDIQDEK NVTCQLTFWE ASERTIRSEA
361 EDSYHFSSAK MTATFLSKKQ EVNMSDSALD CVRDEAINKL QQIFNTSYNQ TYEKYGNVSV
421 FETTGGGLVVF WQGIKQKSLV ELERLANRSS LNLTHNRTKR STDGNNATHL SNMESVHNLV
481 YAQLQFTYDT LRGYINRALA QIAEAWCVDQ RRTLEVFKEL SKINPSAILS AIYNKPAAAR
541 FMGDVLGLAS CVTINQTSVK VLRDMNVKES PGRCYSRPVV IFNFANSSYV QYGQLGEDNE
601 ILLGNHRTEE COLPSLKIFI AGNSAYEYVD YLFKRMIDLS SISTVPSMIA LDIDPLENTD
661 FRVLELYSQK ELRSSNVFDL EEIMREFNSY KQRVKYVEDK VVDPLPPYLK GLDDLMSGGLG
721 AAGKAVGVAI GAVGGAVASV VEGVATFLKN PFGAFTIILV AIAVVIIIYL IYTRQRRLCM
781 QPLQNLFPYL VSADGTTVTS GNTKDTSLQA PPSYEEVYN SGRKGGPPS SDASTAAPPY
841 TNEQAYQMLL ALVRLDAEQR AQQNGTDSLQ GQTGTQDKGQ KPNLLDRLRH RKNGYRHLKD
901 SDEEENV (SEQ ID NO: 106)

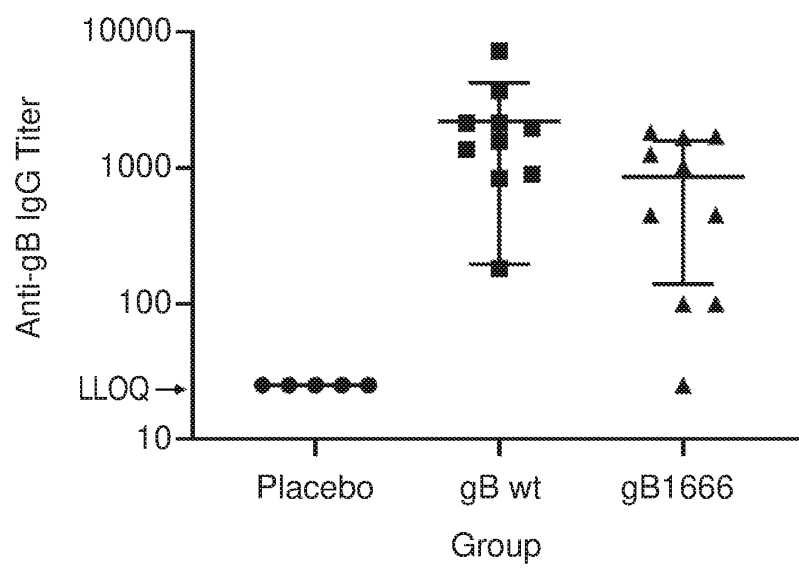
FIG. 11

FIG. 12



FIG. 13

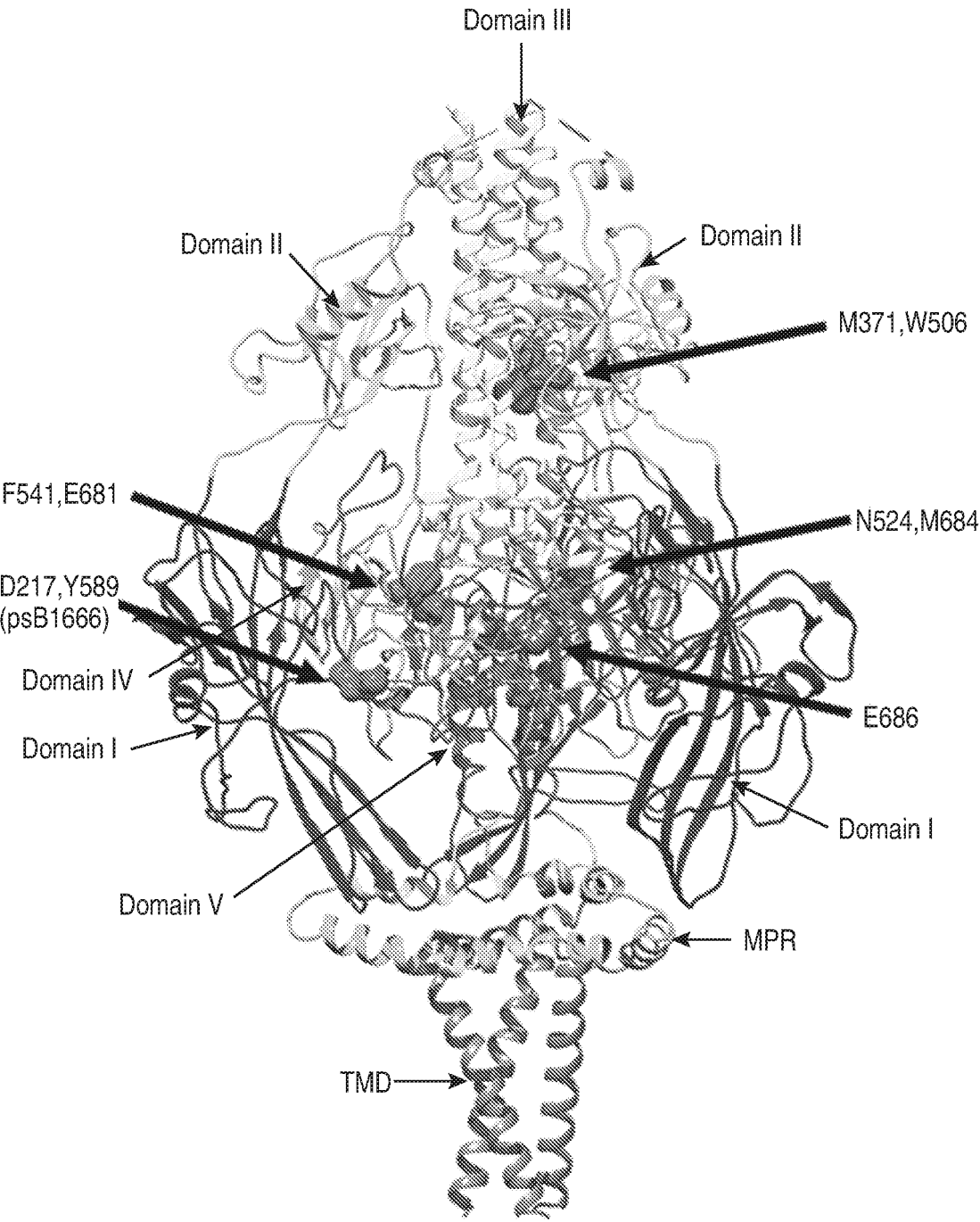


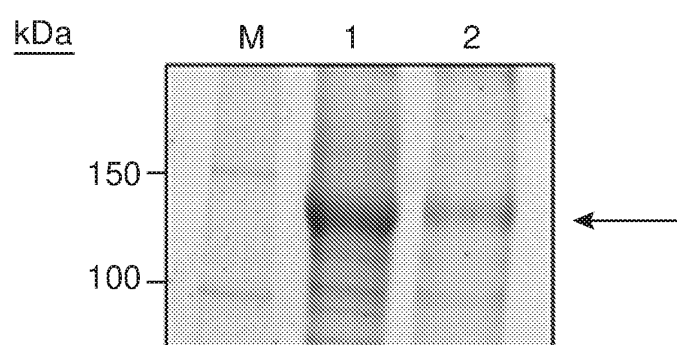
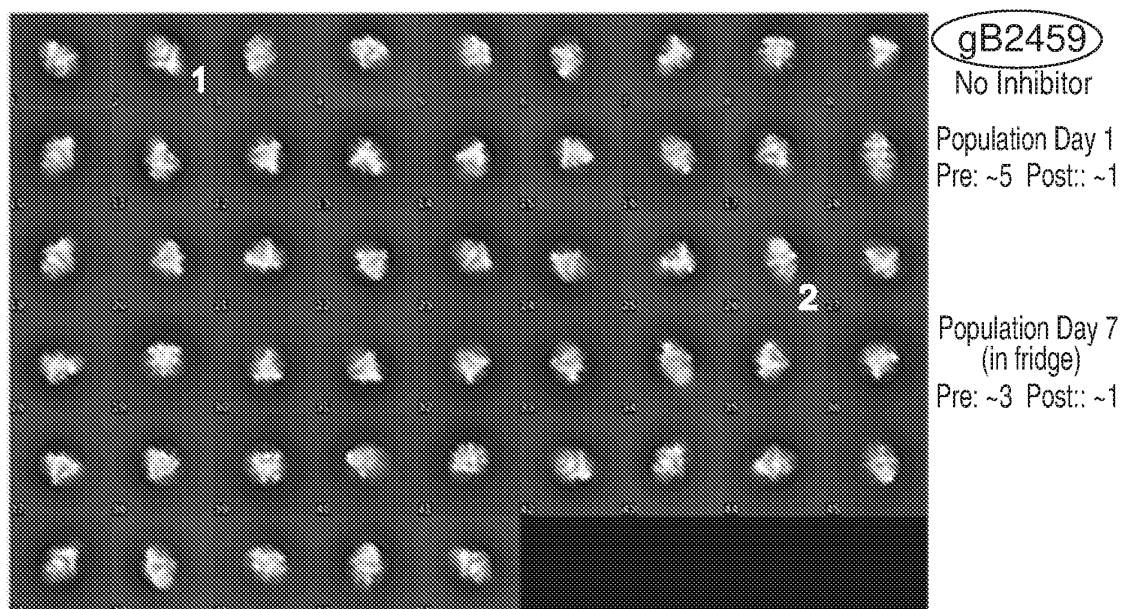
FIG. 14**FIG. 15**

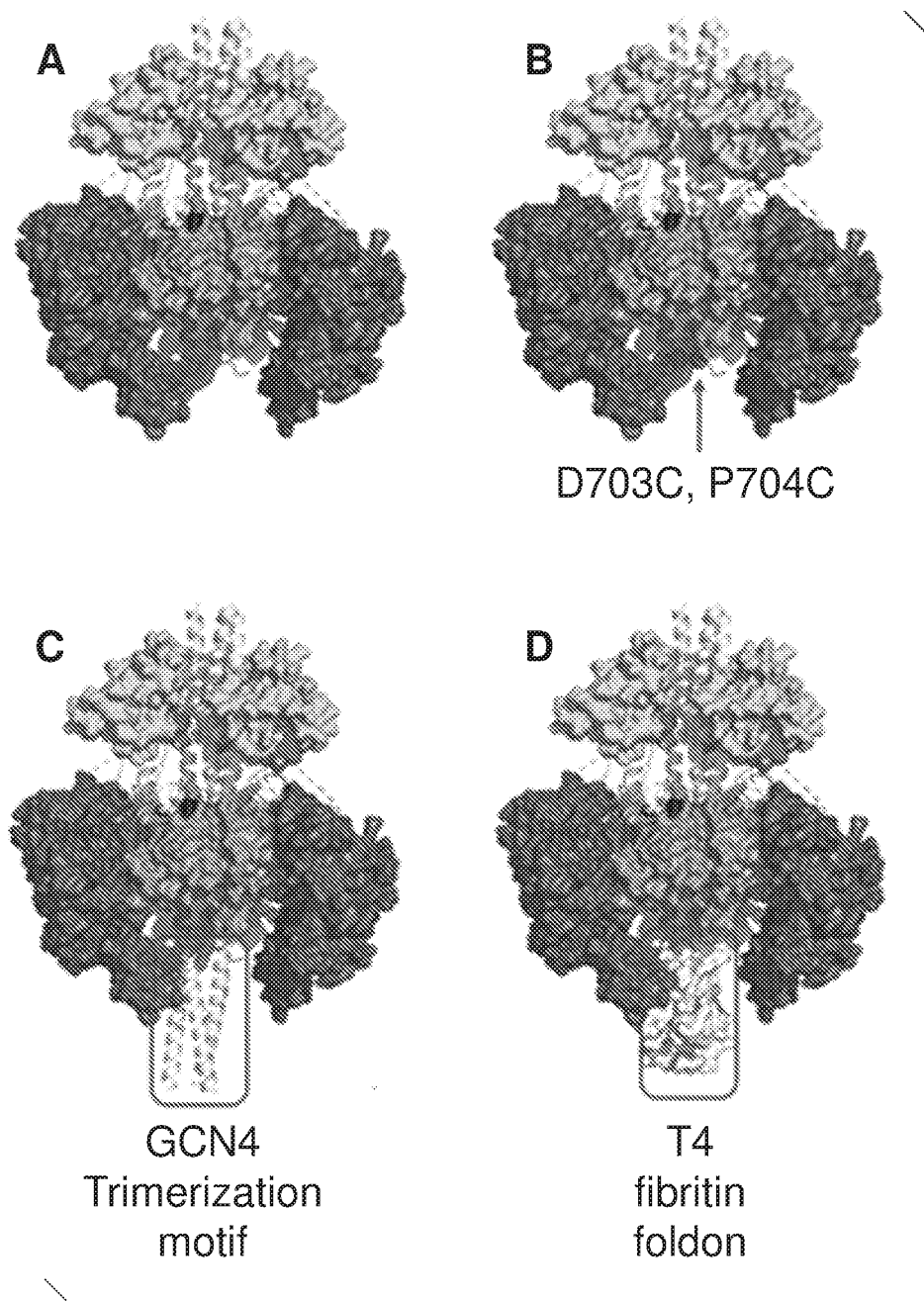
FIG. 16

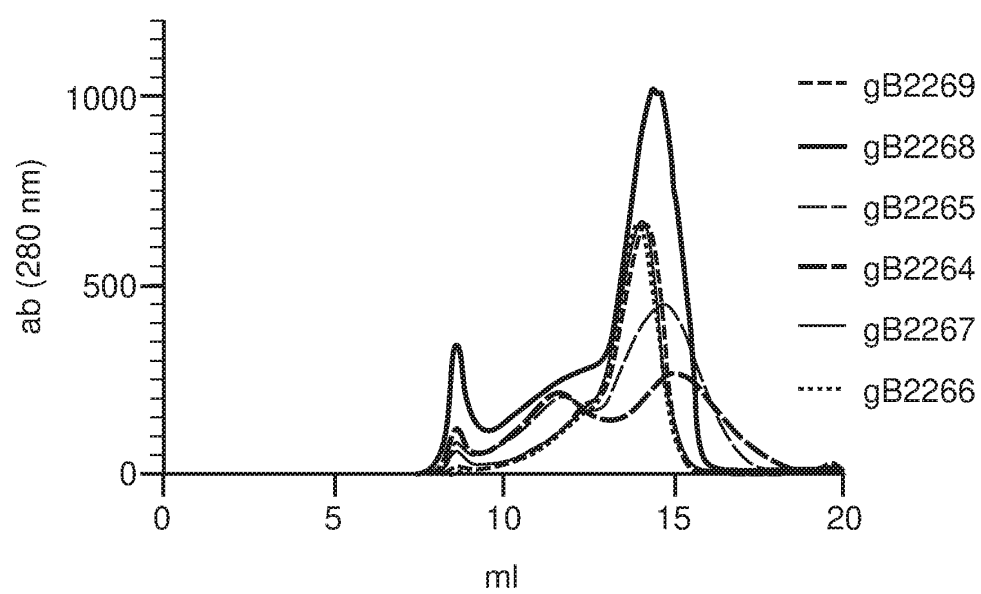
FIG. 17

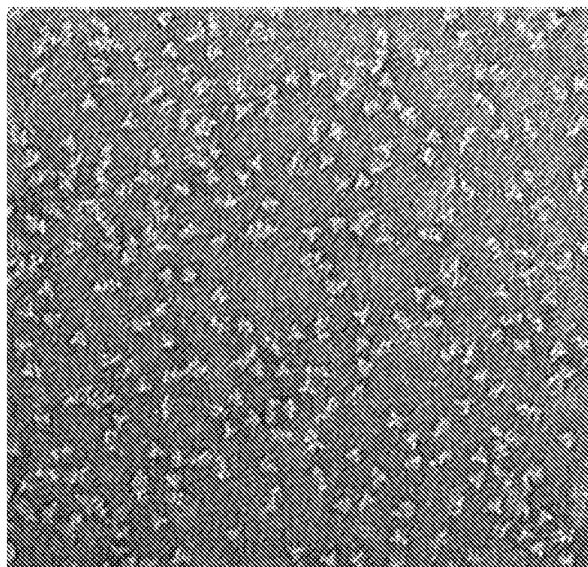
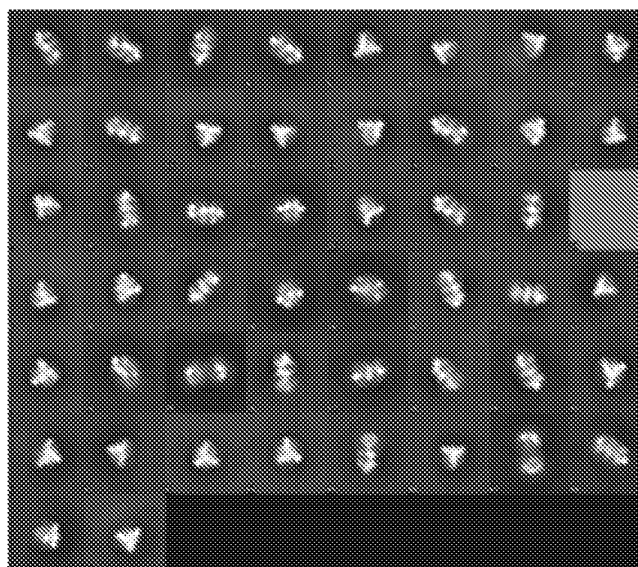
FIG. 18A**FIG. 18B**

FIG. 19A

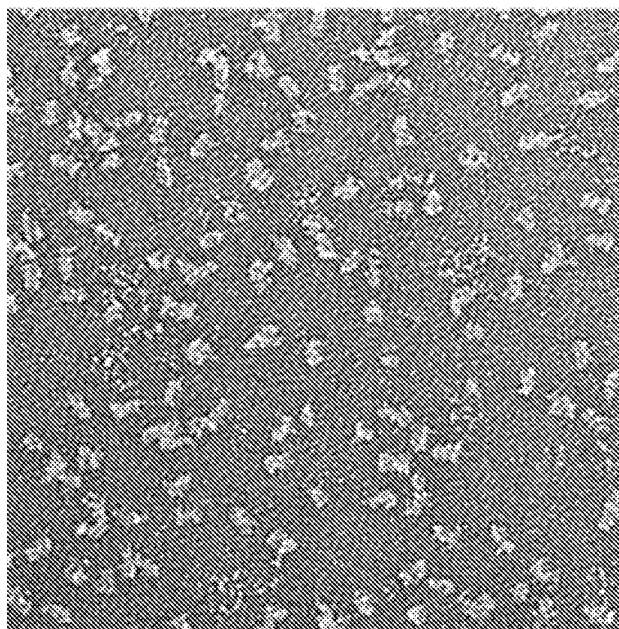


FIG. 19B

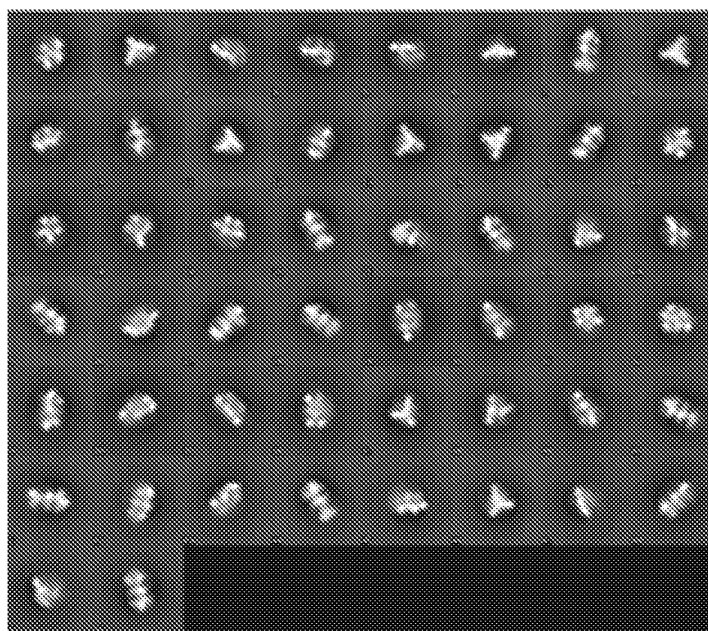


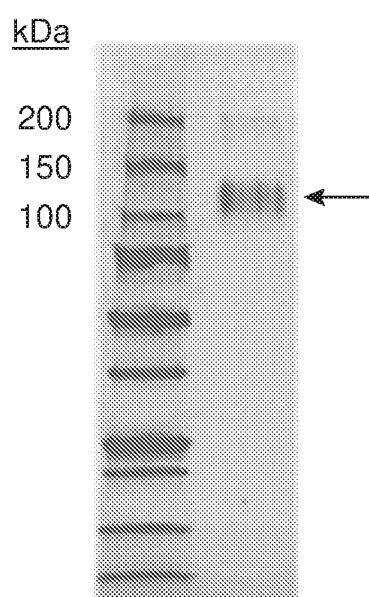
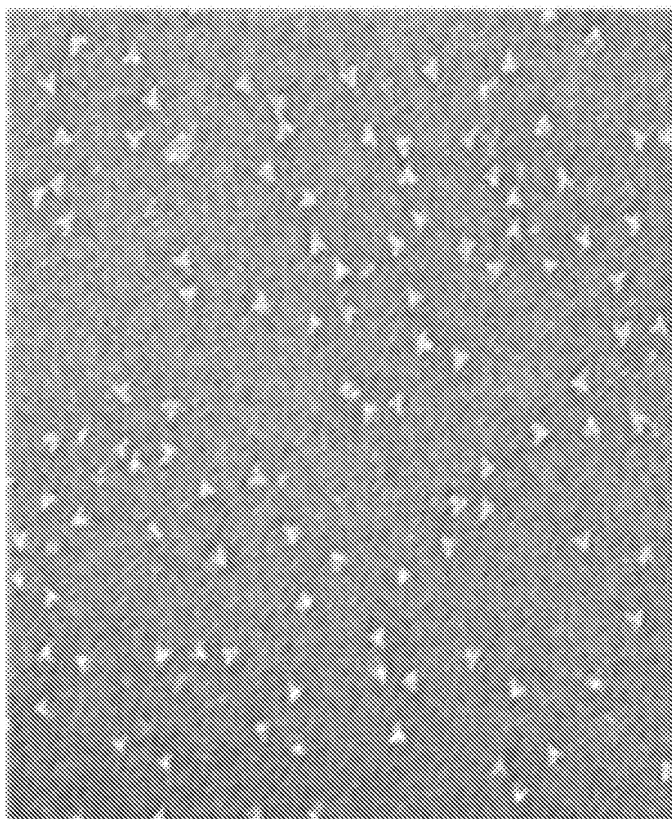
FIG. 20A**FIG. 20B**

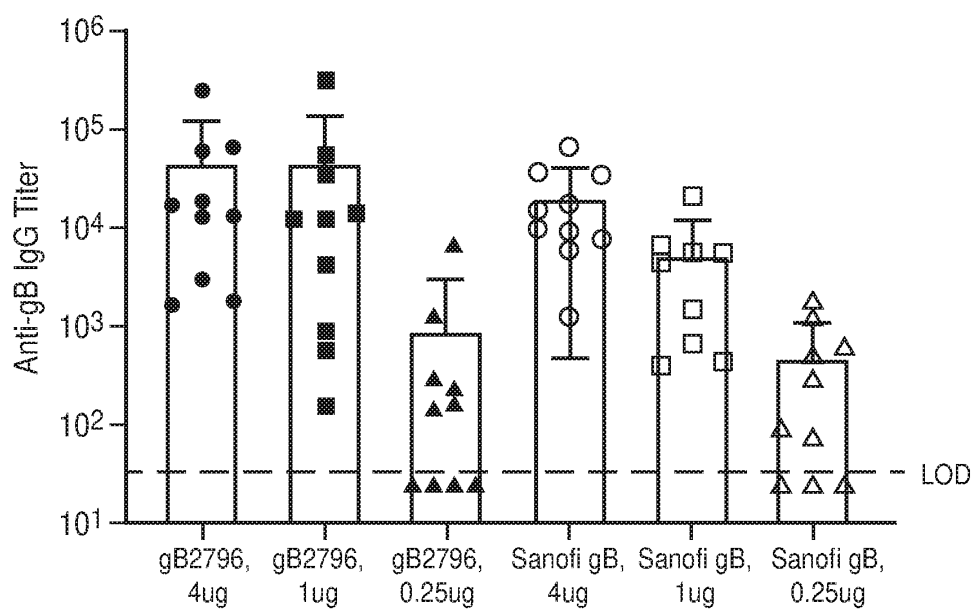
FIG. 21

FIG. 22A

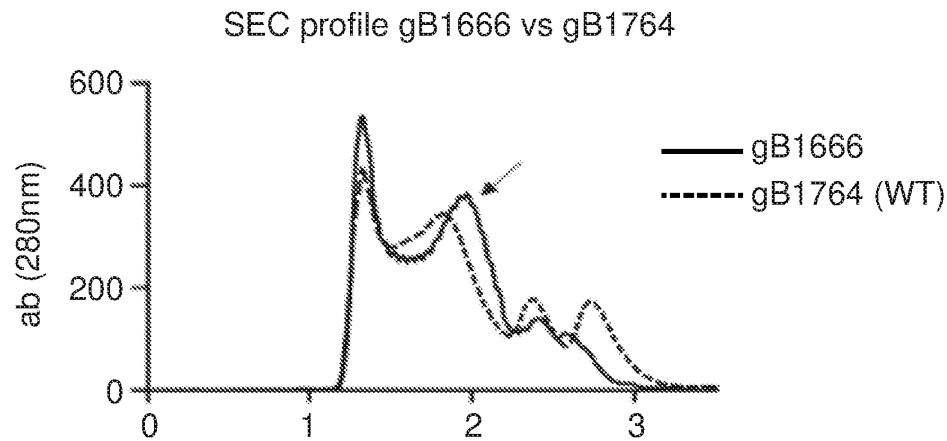


FIG. 22B

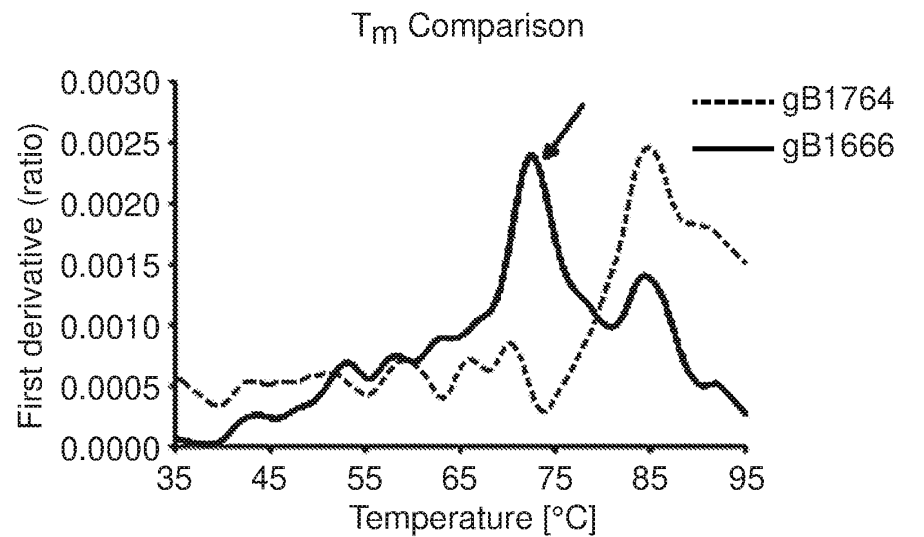


FIG. 23A

PSB1666 W/ or w/o WAY-174865

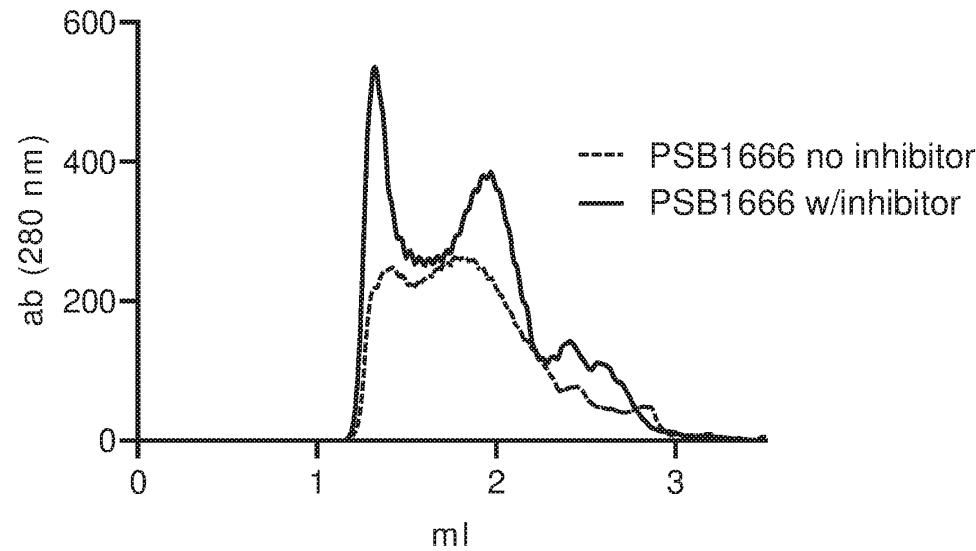


FIG. 23B

T_m Comparison

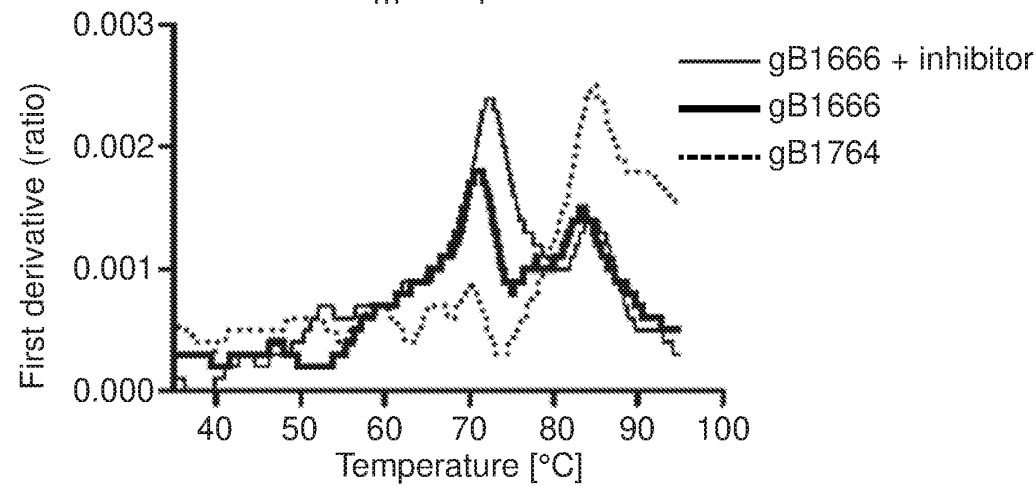


FIG. 24A

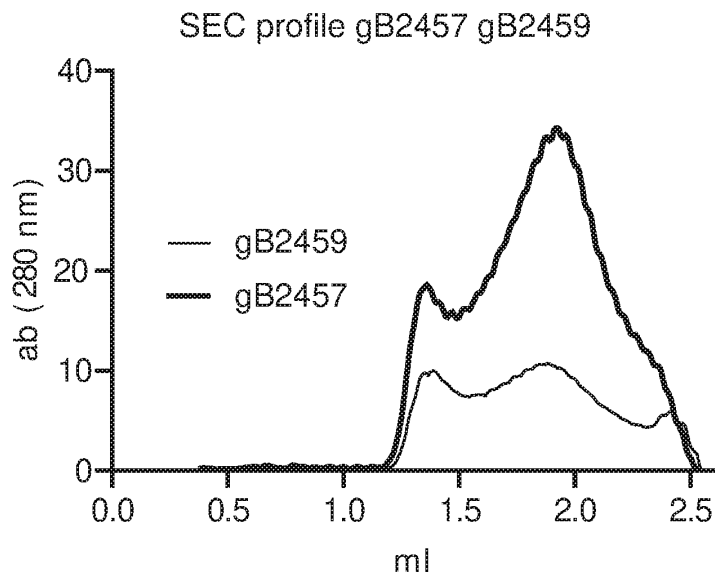


FIG. 24B

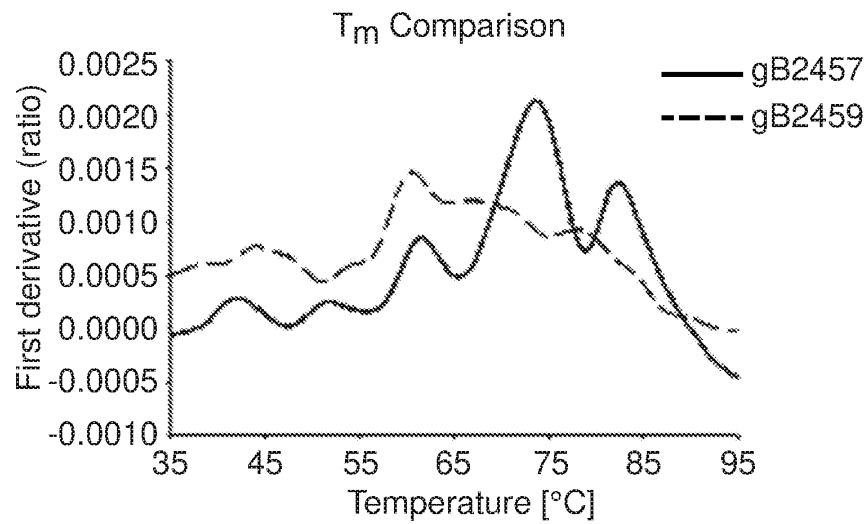


FIG. 25A

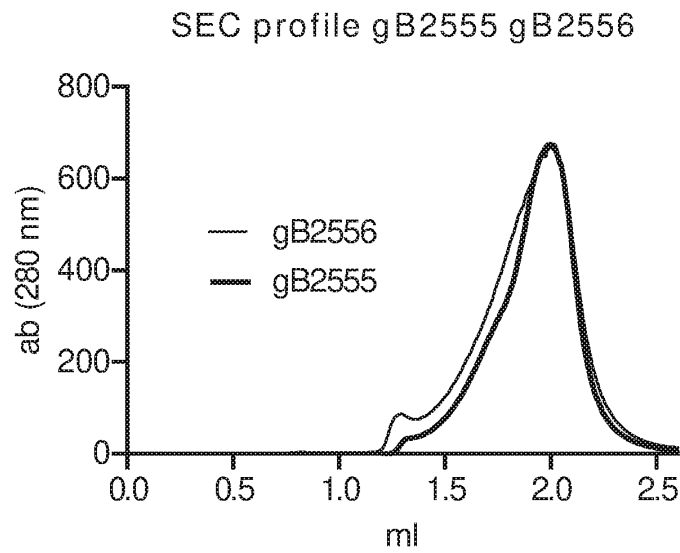


FIG. 25B

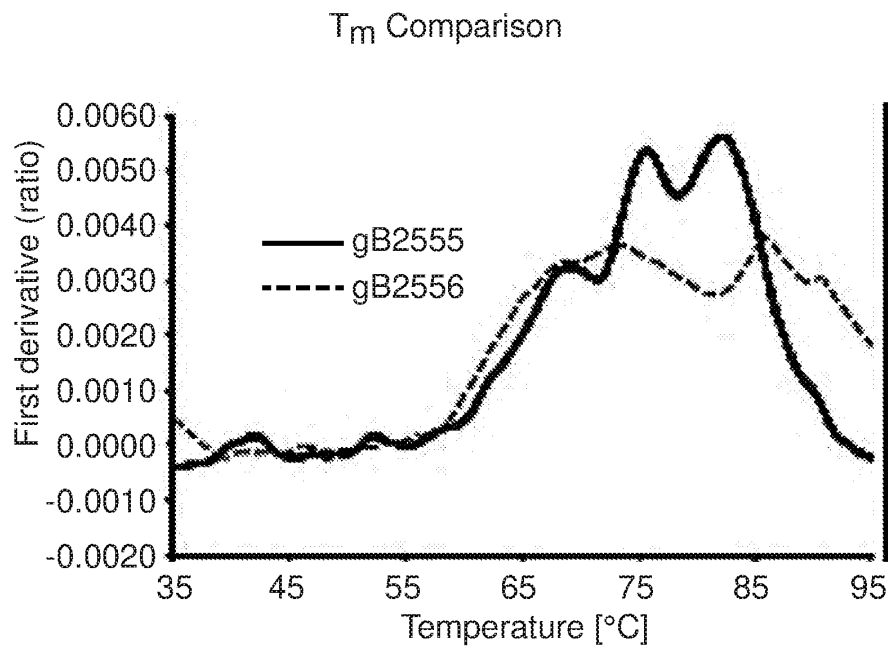
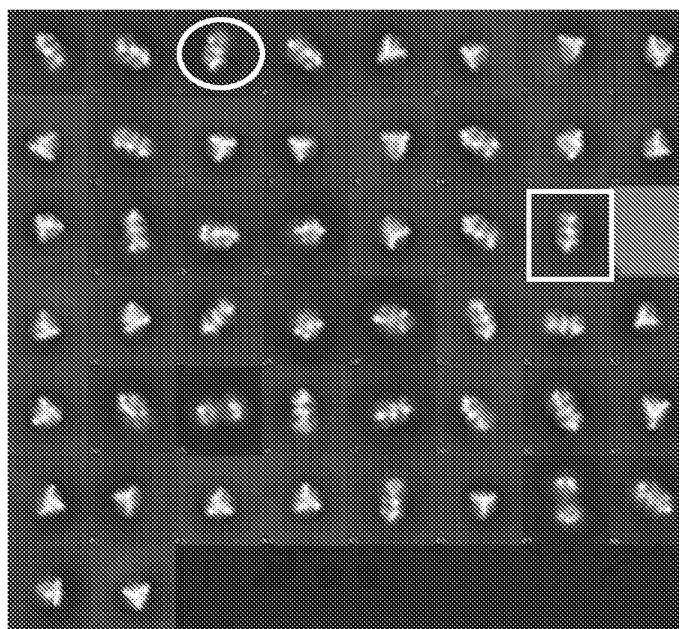


FIG. 25C

gB2555 GCN4 1666
+(M371,W506)



Prefusion like,
tapered shape



Postfusion
domain feature

FIG. 25D

gB2556 GCN4 1666
+(N524,M684)

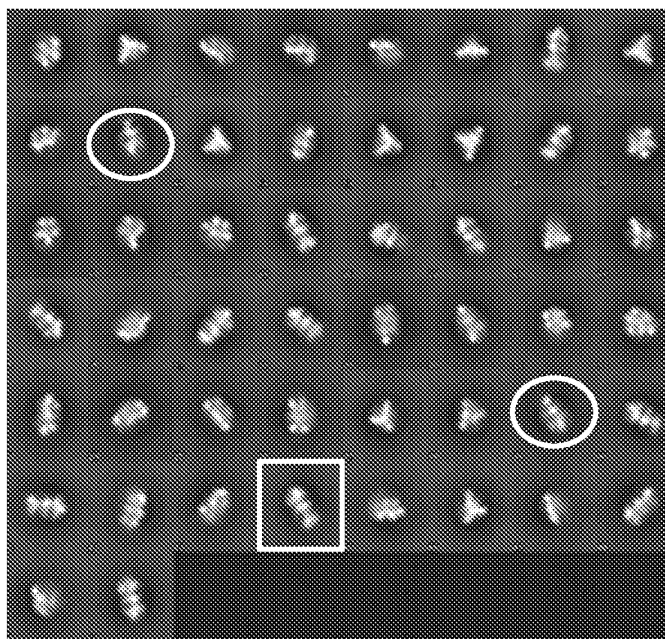


FIG. 26A

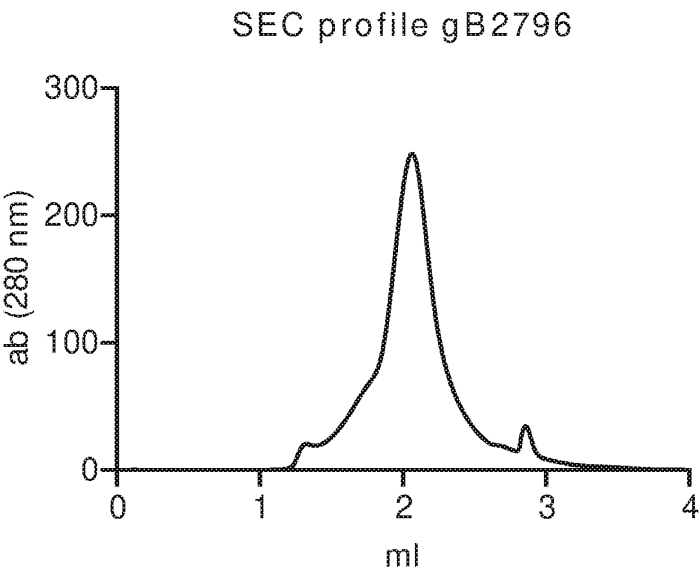


FIG. 26B

