FIG. 1

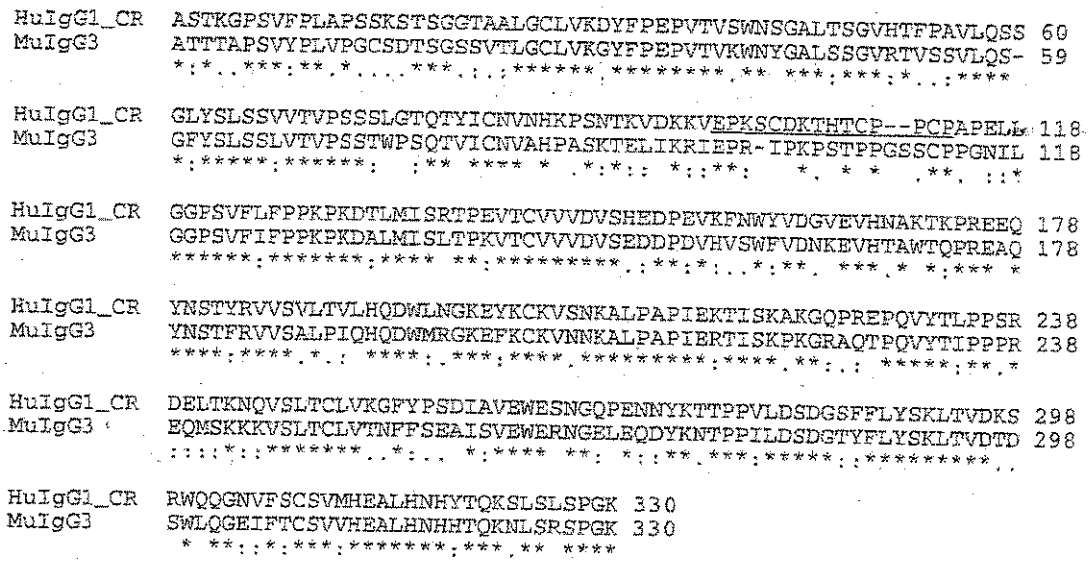

HuIgG1_CR ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
MuIgG3 ATTTAPSVYPLVPGCSDTSGSSVTLGCLVKGYFPEPVTVKWNYGALSSGVRTVSSVLQS- 59
HuIgG1_CR GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCP--PCPAPELL 118
MuIgG3 GFYSLSSLVTVPSSTWPSQTVICNVAHPASKTELIKRIEPR-IPKPSTPPGSSCPPGNIL 118
HuIgG1_CR GGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQ 178
MuIgG3 GGPSVFIFPPKPKDALMISLTPKVTCVVVDVSEDDPDVHVSWFVDNKEVHTAWTQPREAQ 178
HuIgG1_CR YNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSR 238
MuIgG3 YNSTFRVVSALPIQHQDWMRGKEFKCKVNNKALPAPIERTISKPKGRAQTPQVYTIPPPR 238
HuIgG1_CR DELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKS 298
MuIgG3 EQMSKKKVSLTCLVTNFFSEAISVEWERNGELEQDYKNTPPILDSDGTYFLYSKLTVDTD 298
HuIgG1_CR RWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK 330
MuIgG3 SWLQGEIFTCSVVHEALHNHHTQKNLSRSPGK 330

FIG. 2A

Sequence Listing

```
                                                    CH1
V0[H] (SEQ ID NO:9)  ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V1   (SEQ ID NO:11)  ASTKGPSVFPLAPCSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V2   (SEQ ID NO:12)  ASTKGPSVFPLAPCSRSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V3   (SEQ ID NO:13)  ASTKGPSVFPLVPGCSDTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V4   (SEQ ID NO:14)  ASTKGPSVFPLAPGCSDTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V5   (SEQ ID NO:15)  ASTKGPSVFPLAPCSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V6   (SEQ ID NO:16)  ASTKGPSVFPLAPCSRSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V7   (SEQ ID NO:17)  ASTKGPSVFPLAPCSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V8   (SEQ ID NO:18)  ASTKGPSVFPLAPCSRSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V9   (SEQ ID NO:19)  ASTKGPSVFPLAPCSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V10  (SEQ ID NO:20)  ASTKGPSVFPLAPCSRSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V11  (SEQ ID NO:21)  ASTKGPSVFPLVPGCSDTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V12  (SEQ ID NO:22)  ASTKGPSVFPLAPGCSDTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V13  (SEQ ID NO:23)  ASTKGPSVFPLAPCSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V14  (SEQ ID NO:24)  ASTKGPSVFPLAPCSRSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V15  (SEQ ID NO:25)  ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V16  (SEQ ID NO:26)  ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V17  (SEQ ID NO:27)  ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V18  (SEQ ID NO:28)  ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V19  (SEQ ID NO:29)  ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
V20  (SEQ ID NO:30)  ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS 60
                     ***********.*  . .*******************************************

                                                    Hinge
V0[H]      GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---CDKTHTCPPCP APEL 117
V1         GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---SDKTHTCPPCP APEL 117
V2         GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---SDKTHTCPPCP APEL 117
V3         GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---SDKTHTCPPCP APEL 117
V4         GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---SDKTHTCPPCP APEL 117
```

FIG. 2B

```
V5        GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---SDKTHTGPPCP APEL 117
V6        GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---SDKTHTGPPCP APEL 117
V7        GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---SDKTHTGSSCP APEL 117
V8        GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---SDKTHTGSSCP APEL 117
V9        GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS--SD-KTPPGSSCP APEL 117
V10       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS--SD-KTPPGSSCP APEL 117
V11       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS--SD-KTPPGSSCP APEL 117
V12       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS--SD-KTPPGSSCP APEL 117
V13       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPRI---PKPSTPPGSSCP APEL 118
V14       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPRI--PKPSTPPGSSCP APEL 118
V15       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPK----SDKTHTCPPCP APEL 116
V16       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS---SDKTHTCPPCP APEL 117
V17       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKS--SCDKTHTCPPCP APEL 118
V18       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKC---SDKTHTCPPCP APEL 117
V19       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKSDKSCDKTHTCPPCP APEL 120
V20       GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKV EPKSCDKSDKTHTCPPCP APEL 120
          ************************************** **:     .* . ..** **** 
                                  CH2
          ___________________________________________________________
V0[H]     LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V1        LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V2        LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V3        LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V4        LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V5        LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V6        LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V7        LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V8        LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V9        LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V10       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V11       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
```

FIG. 2C

```
V12       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V13       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 178
V14       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 178
V15       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 176
V16       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V17       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 178
V18       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 177
V19       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 180
V20       LGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREE 180
          ************************************************************

                    CH2                                          CH3
V0[H]     QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V1        QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V2        QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V3        QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V4        QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V5        QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V6        QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V7        QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V8        QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V9        QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V10       QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V11       QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V12       QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V13       QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V14       QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 238
V15       QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 238
V16       QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 236
V17       QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 237
V18       QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 238
```

FIG. 2D

```
V19      QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 240
V20      QYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK GQPREPQVYTLPPS 240
         ********************************************** **************

                                        CH3
         ___________________________________________________________
V0[H]    RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V1       RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V2       RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V3       RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V4       RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V5       RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V6       RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V7       RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V8       RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V9       RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V10      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V11      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V12      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V13      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 298
V14      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 298
V15      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 296
V16      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V17      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 298
V18      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 297
V19      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 300
V20      RDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDK 300
         ************************************************************
```

FIG. 2E

	CH3	
V0[H]	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V1	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V2	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V3	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V4	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V5	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V6	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V7	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V8	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V9	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V10	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V11	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V12	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V13	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	331
V14	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	331
V15	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	329
V16	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V17	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	331
V18	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	330
V19	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	333
V20	SRWQQGNVFSCSVMHEALHNHYTQKSLSLSPGK	333
	**********	

FIG. 2F

```
Kappa seq (V19+Modified LC)
V0[L]  (SEQ ID NO:10) RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQD 60
V21    (SEQ ID NO:31) RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQD 60
V22    (SEQ ID NO:32) RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQD 60
V23    (SEQ ID NO:33) RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQD 60
V24    (SEQ ID NO:34) RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQD 60
V25    (SEQ ID NO:35) RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQD 60
V26    (SEQ ID NO:36) RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQD 60
V27    (SEQ ID NO:37) RTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQD 60
                      ************************************************************

V0[L]      SKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRG----EC 107
V21        SKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRG--EGEC 109
V22        SKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGG-EGEC 110
V23        SKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGGGEGEC 111
V24        SKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGG---EC 108
V25        SKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGGG--EC 109
V26        SKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGGGG-EC 109
V27        SKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGGGGGEC 109
           ********************************************     **
```

FIG. 3

Binding of variant 5F1 antibodies to COLO 205

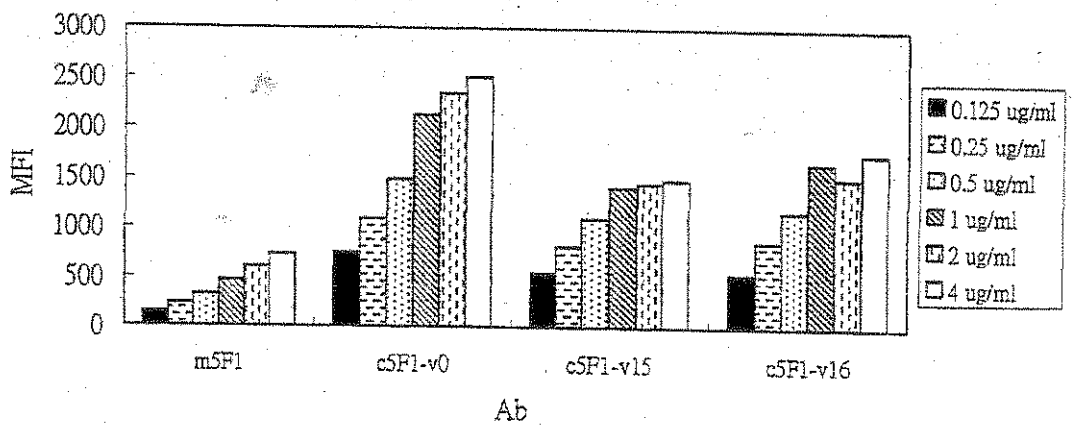


FIG. 4A

The list of the modified humanized 5F1 antibodies. The amino acid of V_H (a) and V_L (b) of h5F1M, h5F1M Va, h5F1M Vs, h5F1A Va and h5F1A Vs, are aligned for comparison.

(a)

```
                                  Fw1                                    CDR1
h5F1M  _HC SEQ ID NO:87  QVQLVQSGAEVKKPGSSVKVSCKASGYTFT SYVMH WVRQAP
h5F1MVa_HC SEQ ID NO:88  QVQLVQSGAEVKKPGSSVKVSCKASGYTFT SYVMH WVRQAP
h5F1MVs_HC SEQ ID NO:89  QVQLVQSGAEVKKPGSSVKVSCKASGYTFT SYVMH WVRQAP
h5F1AVa_HC SEQ ID NO:90  QVQLVQSGAEVKKPGASVKVSCKASGYTFT SYVMH WVRQAP
h5F1AVs_HC SEQ ID NO:91  QVQLVQSGAEVKKPGASVKVSCKASGYTFT SYVMH WVRQAP
                         ****************:************** ***** ******

                  Fw2          CDR2                      Fw3
h5F1M  _HC        GQGLEWIG YINPYNGGTQYNEKFKG KATITADESTNTAYMELSSLRSEDTAVYYCAR RTF
h5F1MVa_HC        GQGLEWIG YINPYNGGTQYNEKFKG KATITADESTNTAYMELSSLTSEDSAVYYCAR RTF
h5F1MVs_HC        GQGLEWIG YINPYNGGTQYNEKFKG KATITADTSTNTAYMELSSLTSEDSAVYYCAR RTF
h5F1AVa_HC        GQRLEWMG YINPYNGGTQYNEKFKG RVTITSDTSASTAYMELSSLTSEDSAVYYCAR RTF
h5F1AVs_HC        GQRLEWMG YINPYNGGTQYNEKFKG RVTITSDTSSSTAYMELSSLTSEDSAVYYCAR RTF
                  ** ***:* ****************** :.***:* *:.********* ***:******* ***

                  CDR3    Fw4
h5F1M  _HC        PYYFDY  WGQGTLVTVSS
h5F1MVa_HC        PYYFDY  WGQGTLVTVSS
h5F1MVs_HC        PYYFDY  WGQGTLVTVSS
h5F1AVa_HC        PYYFDY  WGQGTLVTVSS
h5F1AVs_HC        PYYFDY  WGQGTLVTVSS
                  ****** ***********
```

FIG. 4B

(b)

```
                                          Fw1                          CDR1
h5F1M  _LC SEQ ID NO:92 DIQMTQSPSSLSASVGDRVTITC RSSQSILHSNGNTYLE W
h5F1MVa_LC SEQ ID NO:93 DIQMTQSPSSLSASVGDRVTITC RSSQSILHSNGNTYLE W
h5F1MVs_LC SEQ ID NO:94 DIQMTQSPSSLSASVGDRVTITC RSSQSILHSNGNTYLE W
h5F1AVa_LC SEQ ID NO:95 DIQMTQSPSSLSASVGDRVTITC RSSQSILHSNGNTYLE W
h5F1AVs_LC SEQ ID NO:96 DIQMTQSPSSLSASVGDRVTITC RSSQSILHSNGNTYLE W
                        ************************ **************** *

                    Fw2          CDR2          Fw3                                                  CDR3
h5F1M  _LC      YQQKPGKAPKLLIY KVSNRFS GVPSRFSGSGSGTDFTLTISSLQPDDFATYYC FQGSHAP
h5F1MVa_LC      YQQKPGKAPKLLIY KVSNRFS GVPSRFSGSGSGTDFTLTISSLQPDDFATYYC FQGSHAP
h5F1MVs_LC      YQQKPGKAPKLLIY KVSNRFS GVPSRFSGSGSGTDFTLKISRVEAEDLGTYYC FQGSHAP
h5F1AVa_LC      YQQKPGKAPKLLIY KVSNRFS GVPSRFSGSGSGTDFTFTISSLQPEDIATYYC FQGSHAP
h5F1AVs_LC      YQQKPGKAPKLLIY KVSNRFS GVPSRFSGSGSGTDFTLKISRVEAEDLGTYYC FQGSHAP
                ************** ******* ****************:.** ::.:*:.**** *******

                    Fw4
h5F1M  _LC      LT FGQGTKVELK
h5F1MVa_LC      LT FGQGTKVELK
h5F1MVs_LC      LT FGQGTKVELK
h5F1AVa_LC      LT FGQGTKVEIK
h5F1AVs_LC      LT FGQGTKVEIK
                ** ********:*
```