FIG. 1A: 64G12 VH

QVTLKESGPGILKPSQTLSLTCSFSGFSLSTSGMGIGWIRQPSGKGLEWLAHIWWDDDKYYNPSLKSQLTISRDTST
NQVFLNITSVDTVDTATYYCGRNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:7)

FIG. 1B: H2

QVTLKESGPALVKPTQTLTLTCTFSGFSLSTSGMGIGWIRQPPGKALEWLAHIWWDDDKYYNPSLKSRLTISRDTSK
NQVVLTMTNMDPVDTATYYCGRNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:8)

FIG. 1C: H2-C3

QVTLKESGPALVKPTQTLTLTCTFSGFSLSTSGMRVSWIRQPPGKALEWLARIDWDDDKFYSTSLKTRLTISRDTSK
NQVVLTMTNMDPVDTATYYCGRNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:9)

FIG. 1D: H3

EVQLVESGGGLVQPGGSLRLSCAFSGFTLSTSGMGIGWVRQAPGKGLEWVAHIWWDDDKYYNPSLKSRFTISRDT
SKNTVYLQMNSLRAEDTAVYYCARNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:10)

FIG. 1E: M3

EVQLLESGGGLVQPGGSLRLSCAFSGFTLSTSGMGIGWVRQAPGKGLEWVAHIWWDDDKYYNPSLKSRFTISRDT
SKNTVYLQMNSLRAEDTAVYYCARNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:11)

FIG. 1F: M3-4

EVQLLESGGGLVQPGGSLRLSCAFSGFTLSTSGMGIGWVRQAPGKGLEWVAHIWWDDDKYYNPSLKSRFTISRDT
SKNTVYLQMNSLRAEDTAVYYCARNYYXYDAWFDYWGQGTLVTVS (SEQ ID NO:12)

FIG. 1G: M3-11

EVQLLESGGGLVQPGGSLRLSCAFSGFTLSTSGMGIGWVRQAPGKGLEWVAHIWWDDDKYYNPSLKSRFTISRDT
SKNTVYLQMNSLRAEDTAVYYCARNYYPYDAWFDXWGQGTLVTVS (SEQ ID NO:13)

FIG 1H: M3-A

EVQLLESGGGLVQPGGSLRLSCAFSGFTLSTSG*A*GIGWVRQAPGKGLEWVAHIWWDDDKYYNPSLKSRFTISRDTS
KNTVYLQMNSLRAEDTAVYYCARNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:14)

FIG 1I: M3-B

EVQLLESGGGLVQPGGSLRLSCAFSGFTLSTSGMGIGWVRQAPGKGLEWVAHIWWDDDKYYNPSLK*A*RFTISRDT
SKNTVYLQMNSLRAEDTAVYYCARNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:15)

FIG. 1J: M3-A/B

EVQLLESGGGLVQPGGSLRLSCAFSGFTLSTSG*A*GIGWVRQAPGKGLEWVAHIWWDDDKYYNPSLK*A*RFTISRDTS
KNTVYLQMNSLRAEDTAVYYCARNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:16)

FIG. 1K: DI M3

EVQLLESGGGLVQPGGSLRLSCA*A*SGFT*M*STSGMGIGW*I*RQ*T*PGKGLEWVAHIWWDDDKYYNPSLKSRFTIS*K*DT
SKNT*L*YLQMNSLRAEDTAVYYCARNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:17)

FIG. 1L: DI M3-B

EVQLLESGGGLVQPGGSLRLSCA*A*SGFT*M*STSGMGIGW*I*RQ*T*PGKGLEWVAHIWWDDDKYYNPSLK*A*RFTISRDT
SKNT*L*YLQMNSLRAEDTAVYYCARNYYPYDAWFDYWGQGTLVTVS (SEQ ID NO:18)

FIG. 2A: 64G12 VL

EIVLTQSPTTMAASPGEKITITCSASSSINSNHLHWYQQKPGFSPKVLIYRTSILASGVPTRFSGSGSGTSYSLTIGTM
EAEDVATYYCQQGSNIPFTFGSGTELEIKR (SEQ ID NO:19)

FIG. 2B: K6

EIVLTQSPDFQSVTPKEKVTITCSASSSINSNHLHWYQQKPGQSPKLLIYRTSILASGVPSRFSGSGSGTSFTLTINSL
EAEDVATYYCQQGSNIPFTFGQGTKLEIKR (SEQ ID NO:20)

FIG. 2C: K1

DIQMTQSPSSLSASVGDRVTITCSASSSINSNHLHWYQQKPGKAPKLLIYRTSILASGVPSRFSGSGSGTSFTLTISS
LQPEDFATYYCQQGSNIPFTFGQGTKVEIKR (SEQ ID NO:21)

FIG. 2D: K1-C

DIQMTQSPSSLSASVGDRVTITCSAS*T*SINSNHLHWYQQKPGKAPKLLIYRTSILASGVPSRFSGSGSGTSFTLTISS
LQPEDFATYYCQQGSNIPFTFGQGTKVEIKR (SEQ ID NO:22)

FIG. 2E: K1-D

DIQMTQSPSSLSASVGDRVTITCSASSSINSNHL*N*WYQQKPGKAPKLLIYRTSILASGVPSRFSGSGSGTSFTLTISS
LQPEDFATYYCQQGSNIPFTFGQGTKVEIKR (SEQ ID NO:23)

FIG. 2F: K1-E

DIQMTQSPSSLSASVGDRVTITCSASSSINSNHLHWYQQKPGKAPKLLIYRTSILASGVPSRFSGSGSGTSFTLTISS
LQPEDFATYYCQQTSNIPFTFGQGTKVEIKR (SEQ ID NO:24)

FIG. 2G: K1-C/D

DIQMTQSPSSLSASVGDRVTITCSASTSINSNHLNWYQQKPGKAPKLLIYRTSILASGVPSRFSGSGSGTSFTLTISS
LQPEDFATYYCQQGSNIPFTFGQGTKVEIKR (SEQ ID NO:25)

FIG. 2H: K1-C/E

DIQMTQSPSSLSASVGDRVTITCSASTSINSNHLHWYQQKPGKAPKLLIYRTSILASGVPSRFSGSGSGTSFTLTISS
LQPEDFATYYCQQTSNIPFTFGQGTKVEIKR (SEQ ID NO:26)

FIG. 2I: K1-D/E

DIQMTQSPSSLSASVGDRVTITCSASSSINSNHLNWYQQKPGKAPKLLIYRTSILASGVPSRFSGSGSGTSFTLTISS
LQPEDFATYYCQQTSNIPFTFGQGTKVEIKR (SEQ ID NO:27)

FIG. 2J: K1-C/D/E

DIQMTQSPSSLSASVGDRVTITCSASTSINSNHLNWYQQKPGKAPKLLIYRTSILASGVPSRFSGSGSGTSFTLTISS
LQPEDFATYYCQQTSNIPFTFGQGTKVEIKR (SEQ ID NO:28)

FIG. 2K: DI K1

DIQMTQSPSSLSASVGDR*A*TITCSASSSINSNHLHWY*L*QKPGKAPK*A*LIYRTSILASG*I*PSRFSGSGSGT*D*FTLTISSL
QPED*T*ATYYCQQGSNIPFTFGQGTKVEIKRTVAAP (SEQ ID NO:29)

FIG. 2L: DI K1-C

DIQMTQSPSSLSASVGDRVTITCSAS*T*SINSNHLHWY*L*QKPGKAPK*A*LIYRTSILASG*I*PSRFSGSGSGT*D*FTLTISSL
QPED*T*ATYYCQQGSNIPFTFGQGTKVEIKRTVAAP (SEQ ID NO:30)

FIG. 2M: DI K1-DS

DIQMTQSPSSLSASVGDR*A*TITCSASSSINSNHLHWY*L*QKPGKAPK*A*LIYRTSILASG*I*PSRFSGSGSGTSFTLTISSL
QPED*T*ATYYCQQGSNIPFTFGQGTKVEIKRTVAAP (SEQ ID NO:31)

FIG. 2N: DI K1-C-DS

DIQMTQSPSSLSASVGDRVTITCSAS*T*SINSNHLHWY*L*QKPGKAPK*A*LIYRTSILASG*I*PSRFSGSGSGTSFTLTISSL
QPED*T*ATYYCQQGSNIPFTFGQGTKVEIKRTVAAP (SEQ ID NO:32)

FIG. 2O: DI K1-A19V

DIQMTQSPSSLSASVGDRVTITCSASSSINSNHLHWY*L*QKPGKAPK*A*LIYRTSILASG*I*PSRFSGSGSGT*D*FTLTISSL
QPED*T*ATYYCQQGSNIPFTFGQGTKVEIKRTVAAP (SEQ ID NO:33)

FIG. 2P: DI K1-L37Q

DIQMTQSPSSLSASVGDR*A*TITCSASSSINSNHLHWYQQKPGKAPK*A*LIYRTSILASG*I*PSRFSGSGSGT*D*FTLTISS
LQPED*T*ATYYCQQGSNIPFTFGQGTKVEIKRTVAAP (SEQ ID NO:34)

FIG. 2Q: DI K1-A46L

DIQMTQSPSSLSASVGDR*A*TITCSASSSINSNHLHWY*L*QKPGKAPKLLIYRTSILASG*I*PSRFSGSGSGT*D*FTLTISSL
QPED*T*ATYYCQQGSNIPFTFGQGTKVEIKRTVAAP (SEQ ID NO:35)

FIG. 2R: DI K1-I58V

DIQMTQSPSSLSASVGDR*A*TITCSASSSINSNHLHWY*L*QKPGKAPK*A*LIYRTSILASGVPSRFSGSGSGT*D*FTLTISS
LQPED*T*ATYYCQQGSNIPFTFGQGTKVEIKRTVAAP (SEQ ID NO:36)

FIG. 2S: DI K1-T83F

DIQMTQSPSSLSASVGDR*A*TITCSASSSINSNHLHWY*L*QKPGKAPK*A*LIYRTSILASG*I*PSRFSGSGSGT*D*FTLTISSL
QPEDF*A*TYYCQQGSNIPFTFGQGTKVEIKRTVAAP (SEQ ID NO:37)

FIG. 3A: M3

gaggtgcagctgttggagtctgggggaggcttggtacagcctgggggtccctgagactctcctgtgcattct
ccggattcaccctgagcacttctggtatgggtataggctgggtccgccaggctcccgggaaggggctggag
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ctgtgcgagaaattactatccttacgacgcctggtttgactactggggtcaaggtaccctagtcaccgtctca
(SEQ ID NO:38)

FIG. 3B: K1

gatatccagatgacccagtccccgagctccctgtccgcctctgtgggcgatagggtcaccatcacctgcagt
gccagctcaagtataaattccaatcacttacactggtatcaacagaaaccaggaaaggcgccgaaactgc
tgatttacaggacatccattctggcttctggagtcccttctcgcttctctggttccggatctgggacgtctttcactct
gaccatcagctccctgcagccggaagacttcgcaacttattactgtcagcagggtagtaatatcccattcact
ttcggacagggtaccaaggtggagatcaaacgt (SEQ ID NO:39)

FIG. 3C: DI M3-B

gaggtgcagctgttggagtctgggggaggcttggtacagcctgggggtccctgagactctcctgtgcagc
ctccggcttcaccatgagcacttccggaatgggtataggctggatccgccagacccccgggaaggggctc
gagtgggtcgcacacatttggtgggatgatgataagtactataatccatccctgaaggctagattcaccatct
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attactgtgcgagaaattactatccttacgacgcctggtttgactactggggtcaaggtaccctagtcaccgtct
ca (SEQ ID NO:40)

FIG. 3D: K1-C

gatatccagatgacccagtccccgagctccctgtccgcctctgtgggcgatagggtcaccatcacctgcagt
gccagcacaagtataaattccaatcacttacactggtatcaacagaaaccaggaaaggcgccgaaactg
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ctgaccatcagctccctgcagccggaagacttcgcaacttattactgtcagcagggtagtaatatcccattca
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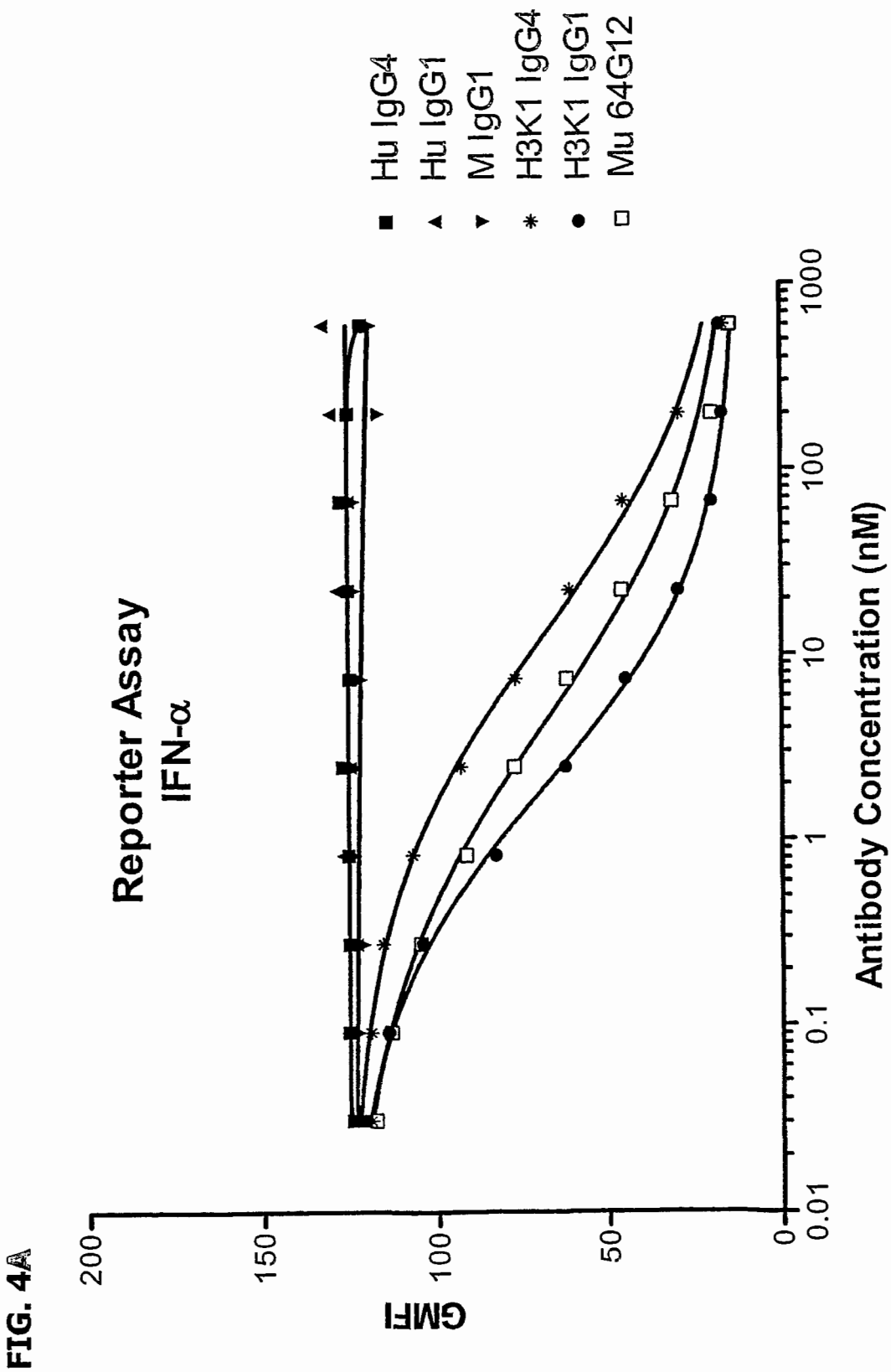

Reporter Assay
IFN-α
GMFI
200
150
100
50
0
0.01
0.1
1
10
100
1000
Antibody Concentration (nM)
Hu IgG4
Hu IgG1
M IgG1
H3K1 IgG4
H3K1 IgG1
Mu 64G12

FIG. 4A

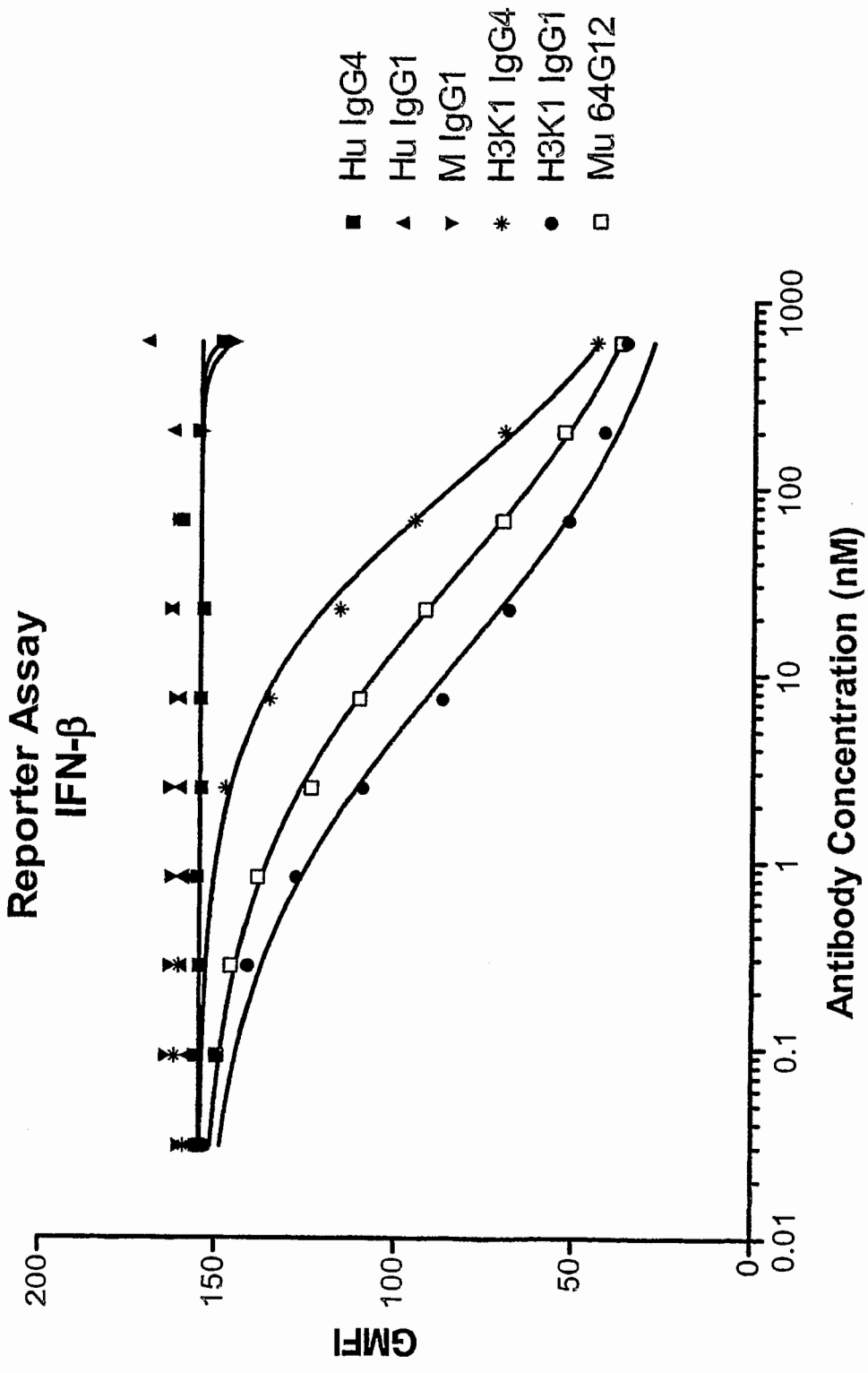
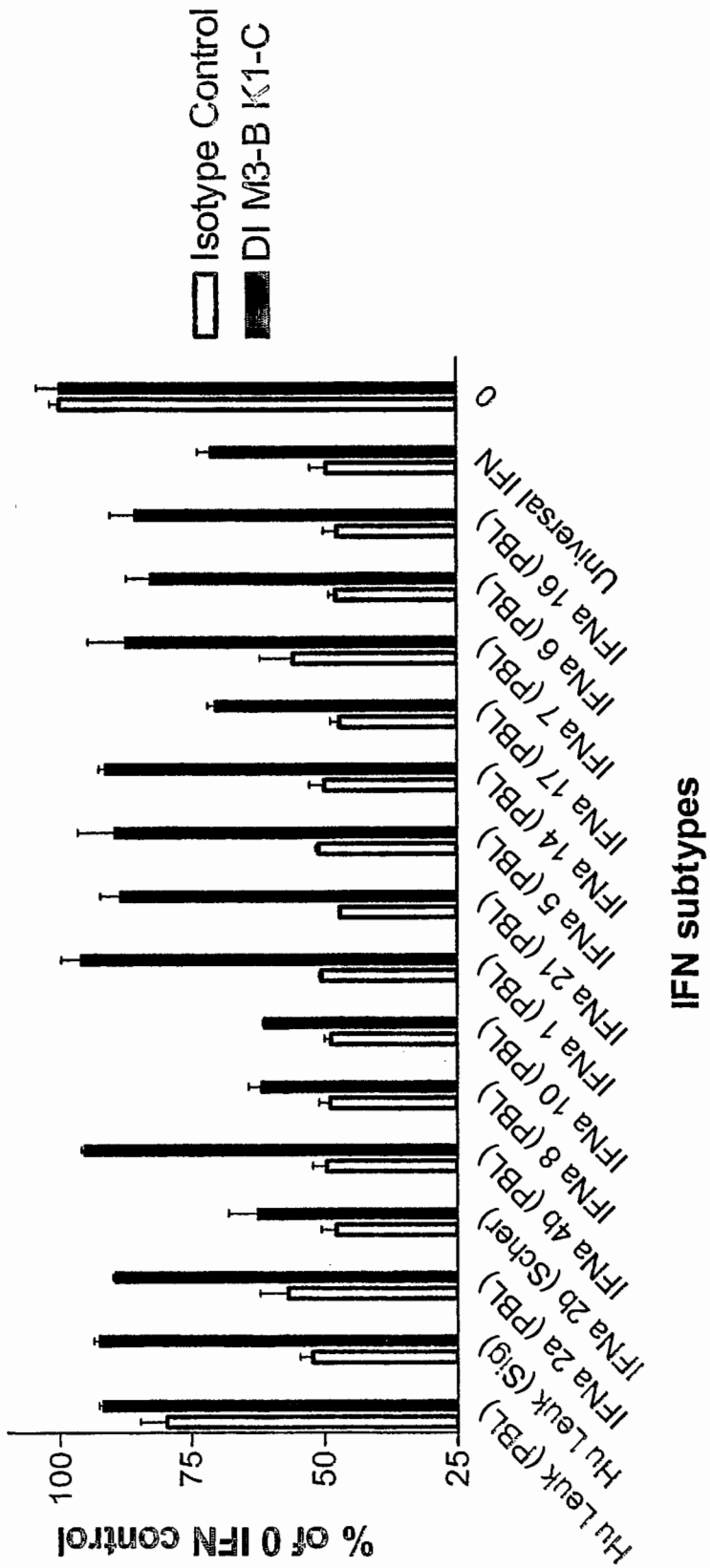

Reporter Assay
IFN-β
GMFI
200
150
100
50
0
0.01
0.1
1
10
100
1000
Antibody Concentration (nM)
Hu IgG4
Hu IgG1
M IgG1
H3K1 IgG4
H3K1 IgG1
Mu 64G12

FIG. 4B

FIG. 5


Isotype Control
DI M3-B K1-C
% of 0 IFN control
100
75
50
25
0
Universal IFN
IFNa 16 (PBL)
IFNa 6 (PBL)
IFNa 7 (PBL)
IFNa 17 (PBL)
IFNa 14 (PBL)
IFNa 5 (PBL)
IFNa 21 (PBL)
IFNa 1 (PBL)
IFNa 10 (PBL)
IFNa 8 (PBL)
IFNa 4b (Scherer)
IFNa 2b (PBL)
IFNa 2a (PBL)
Hu Leuk (Sig)
Hu Leuk (PBL)
IFN subtypes

SEQUENCE LISTING

<110> Medarex, Inc.
CARDARELLI, Josephine M.
CHEN, Tseng-hui Timothy
KING, David
BEBBINGTON, Christopher R.
POGUE, Sarah Lee
CARR, Francis J.
WILLIAMS, Stephen

<120> Humanized Antibodies to Interferon Alpha Receptor-1 (IFNAR-1)

<130> 2201664-SG0

<140> PCT/US2004/012649
<141> 2004-04-23

<150> 60/465,058
<151> 2003-04-23

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35 40 45

Trp Leu Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
50 55 60

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Leu Lys Ser Gln Leu Thr Ile Ser Arg Asp Thr Ser Thr Asn Gln Val
65                  70                  75                  80

Phe Leu Asn Ile Thr Ser Val Asp Thr Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Gly Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser
        115                 120
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1               5                   10                  15

Thr Leu Thr Leu Thr Cys Thr Phe Ser Gly Phe Ser Leu Ser Thr Ser
            20                  25                  30

Gly Met Gly Ile Gly Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
        35                  40                  45

Trp Leu Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Leu Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Val
65                  70                  75                  80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
                85                  90                  95

Cys Gly Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
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Gln Gly Thr Leu Val Thr Val Ser
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20 25 30

Gly Met Arg Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala Arg Ile Asp Trp Asp Asp Asp Lys Phe Tyr Ser Thr Ser
50 55 60

Leu Lys Thr Arg Leu Thr Ile Ser Arg Asp Thr Ser Lys Asn Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
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Cys Gly Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
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Gln Gly Thr Leu Val Thr Val Ser
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1 5 10 15

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Ser Leu Arg Leu Ser Cys Ala Phe Ser Gly Phe Thr Leu Ser Thr Ser
            20                  25                  30

Gly Met Gly Ile Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Val Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Phe Thr Ile Ser Arg Asp Thr Ser Lys Asn Thr Val
65                  70                  75                  80

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
                85                  90                  95

Cys Ala Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser
        115                 120
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Ser Leu Arg Leu Ser Cys Ala Phe Ser Gly Phe Thr Leu Ser Thr Ser
            20                  25                  30

Gly Met Gly Ile Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Val Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Phe Thr Ile Ser Arg Asp Thr Ser Lys Asn Thr Val
65                  70                  75                  80
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Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
                85                  90                  95

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Gln Gly Thr Leu Val Thr Val Ser
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Ser Leu Arg Leu Ser Cys Ala Phe Ser Gly Phe Thr Leu Ser Thr Ser
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Gly Met Gly Ile Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Val Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Phe Thr Ile Ser Arg Asp Thr Ser Lys Asn Thr Val
65                  70                  75                  80

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
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Cys Ala Arg Asn Tyr Tyr Xaa Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
            100                 105                 110
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Gln Gly Thr Leu Val Thr Val Ser
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1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Phe Ser Gly Phe Thr Leu Ser Thr Ser
20 25 30

Gly Met Gly Ile Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
35 40 45

Trp Val Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Phe Thr Ile Ser Arg Asp Thr Ser Lys Asn Thr Val
65 70 75 80

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
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Cys Ala Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Xaa Trp Gly
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Gln Gly Thr Leu Val Thr Val Ser
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20 25 30

Gly Ala Gly Ile Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
35 40 45

Trp Val Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ser Arg Phe Thr Ile Ser Arg Asp Thr Ser Lys Asn Thr Val
65 70 75 80

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
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Cys Ala Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
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1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Phe Ser Gly Phe Thr Leu Ser Thr Ser
20 25 30

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Gly Met Gly Ile Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Val Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ala Arg Phe Thr Ile Ser Arg Asp Thr Ser Lys Asn Thr Val
65                  70                  75                  80

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
                85                  90                  95

Cys Ala Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
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Gln Gly Thr Leu Val Thr Val Ser
        115                 120
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            20                  25                  30

Gly Ala Gly Ile Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Val Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ala Arg Phe Thr Ile Ser Arg Asp Thr Ser Lys Asn Thr Val
65                  70                  75                  80

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
                85                  90                  95
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Cys Ala Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser
        115                 120
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1               5                   10                  15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Met Ser Thr Ser
            20                  25                  30

Gly Met Gly Ile Gly Trp Ile Arg Gln Thr Pro Gly Lys Gly Leu Glu
        35                  40                  45

Trp Val Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
    50                  55                  60

Leu Lys Ser Arg Phe Thr Ile Ser Lys Asp Thr Ser Lys Asn Thr Leu
65                  70                  75                  80

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
                85                  90                  95

Cys Ala Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
            100                 105                 110

Gln Gly Thr Leu Val Thr Val Ser
        115                 120
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<210> 18
<211> 120
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 18

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Met Ser Thr Ser
20 25 30

Gly Met Gly Ile Gly Trp Ile Arg Gln Thr Pro Gly Lys Gly Leu Glu
35 40 45

Trp Val Ala His Ile Trp Trp Asp Asp Asp Lys Tyr Tyr Asn Pro Ser
50 55 60

Leu Lys Ala Arg Phe Thr Ile Ser Arg Asp Thr Ser Lys Asn Thr Leu
65 70 75 80

Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
85 90 95

Cys Ala Arg Asn Tyr Tyr Pro Tyr Asp Ala Trp Phe Asp Tyr Trp Gly
100 105 110

Gln Gly Thr Leu Val Thr Val Ser
115 120

<210> 19
<211> 109
<212> PRT
<213> Mus musculus

<400> 19

Glu Ile Val Leu Thr Gln Ser Pro Thr Thr Met Ala Ala Ser Pro Gly
1 5 10 15

Glu Lys Ile Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
20 25 30

His Leu His Trp Tyr Gln Gln Lys Pro Gly Phe Ser Pro Lys Val Leu
35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Thr Arg Phe Ser

```
    50                  55                  60

Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Gly Thr Met Glu
65                  70                  75                  80

Ala Glu Asp Val Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Ser Gly Thr Glu Leu Glu Ile Lys Arg
            100                 105


<210>  20
<211>  109
<212>  PRT
<213>  Artificial

<220>
<223>  Synthetic

<400>  20

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1               5                   10                  15

Glu Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
            20                  25                  30

His Leu His Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Asn Ser Leu Glu
65                  70                  75                  80

Ala Glu Asp Val Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
            100                 105


<210>  21
<211>  109
<212>  PRT
<213>  Artificial
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<220>
<223> Synthetic

<400> 21

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
20 25 30

His Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105

<210> 22
<211> 109
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 22

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Thr Ser Ile Asn Ser Asn
20 25 30

His Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser

```
    50                  55                  60

Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105


<210>  23
<211>  109
<212>  PRT
<213>  Homo sapiens

<400>  23

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
            20                  25                  30

His Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105


<210>  24
<211>  109
<212>  PRT
<213>  Artificial

<220>
<223>  Synthetic
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<400> 24

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
20 25 30

His Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Ser Asn Ile Pro
85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
100 105

<210> 25
<211> 109
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 25

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Thr Ser Ile Asn Ser Asn
20 25 30

His Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
50 55 60

```
Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 26
<211> 109
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 26

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Thr Ser Ile Asn Ser Asn
            20                  25                  30

His Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 27
<211> 109
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 27

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                  10                  15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
            20                  25                  30

His Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105
```

<210> 28
<211> 109
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 28

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                  10                  15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Thr Ser Ile Asn Ser Asn
            20                  25                  30

His Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
    50                  55                  60
```

```
Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg
            100                 105

<210>  29
<211>  114
<212>  PRT
<213>  Artificial

<220>
<223>  Synthetic

<400>  29

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15

Asp Arg Ala Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
            20                  25                  30

His Leu His Trp Tyr Leu Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Ile Pro Ser Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
            100                 105                 110

Ala Pro

<210>  30
<211>  114
<212>  PRT
```

<213> Artificial

<220>
<223> Synthetic

<400> 30

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Thr Ser Ile Asn Ser Asn
20 25 30

His Leu His Trp Tyr Leu Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu
35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Ile Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
65 70 75 80

Pro Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro

<210> 31
<211> 114
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 31

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Ala Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
20 25 30

```
His Leu His Trp Tyr Leu Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Ile Pro Ser Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
            100                 105                 110

Ala Pro
```

<210> 32
<211> 114
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 32

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Thr Ser Ile Asn Ser Asn
            20                  25                  30

His Leu His Trp Tyr Leu Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Ile Pro Ser Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Ser Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95
```

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro

<210> 33
<211> 114
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 33

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
20 25 30

His Leu His Trp Tyr Leu Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu
35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Ile Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
65 70 75 80

Pro Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro

<210> 34
<211> 114
<212> PRT
<213> Artificial

<220>

<223> Synthetic

<400> 34

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Ala Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
20 25 30

His Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu
35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Ile Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
65 70 75 80

Pro Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro

<210> 35
<211> 114
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 35

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Ala Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
20 25 30

His Leu His Trp Tyr Leu Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu
35 40 45

```
Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Ile Pro Ser Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
            100                 105                 110

Ala Pro
```

<210> 36
<211> 114
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 36

```
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1               5                   10                  15

Asp Arg Ala Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
            20                  25                  30

His Leu His Trp Tyr Leu Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu
        35                  40                  45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Val Pro Ser Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
65                  70                  75                  80

Pro Glu Asp Thr Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
                85                  90                  95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
            100                 105                 110
```

Ala Pro

<210> 37
<211> 114
<212> PRT
<213> Artificial

<220>
<223> Synthetic

<400> 37

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

Asp Arg Ala Thr Ile Thr Cys Ser Ala Ser Ser Ser Ile Asn Ser Asn
20 25 30

His Leu His Trp Tyr Leu Gln Lys Pro Gly Lys Ala Pro Lys Ala Leu
35 40 45

Ile Tyr Arg Thr Ser Ile Leu Ala Ser Gly Ile Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Ser Asn Ile Pro
85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr Val Ala
100 105 110

Ala Pro

<210> 38
<211> 360
<212> DNA
<213> Homo sapiens

<400> 38
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60

tcctgtgcat tctccggatt caccctgagc acttctggta tgggtatagg ctgggtccgc 120

caggctcccg ggaaggggct ggagtgggtc gcacacattt ggtgggatga tgataagtac 180

tataatccat ccctgaagag tcggttcacc atctccagag acacttccaa gaacacggta 240

tatctgcaaa tgaacagcct gagagccgag gacactgcag tatattactg tgcgagaaat 300

tactatcctt acgacgcctg gtttgactac tggggtcaag gtaccctagt caccgtctca 360

<210> 39
<211> 327
<212> DNA
<213> Artificial

<220>
<223> Synthetic

<400> 39
gatatccaga tgacccagtc cccgagctcc ctgtccgcct ctgtgggcga tagggtcacc 60

atcacctgca gtgccagctc aagtataaat tccaatcact tacactggta tcaacagaaa 120

ccaggaaagg cgccgaaact gctgatttac aggacatcca ttctggcttc tggagtccct 180

tctcgcttct ctggttccgg atctgggacg tctttcactc tgaccatcag ctccctgcag 240

ccggaagact tcgcaactta ttactgtcag cagggtagta atatcccatt cactttcgga 300

cagggtacca aggtggagat caaacgt 327

<210> 40
<211> 360
<212> DNA
<213> Homo sapiens

<400> 40
gaggtgcagc tgttggagtc tgggggaggc ttggtacagc ctgggggggtc cctgagactc 60

tcctgtgcag cctccggctt caccatgagc acttccggaa tgggtatagg ctggatccgc 120

cagaccccg ggaaggggct cgagtgggtc gcacacattt ggtgggatga tgataagtac 180

tataatccat ccctgaaggc tagattcacc atctccagag acacttccaa gaacacgctg 240

tatctgcaaa tgaacagcct gagagccgag gacactgcag tatattactg tgcgagaaat 300

tactatcctt acgacgcctg gtttgactac tggggtcaag gtaccctagt caccgtctca 360

<210> 41
<211> 327
<212> DNA
<213> Artificial

<220>

<223> Synthetic

<400> 41
gatatccaga tgacccagtc cccgagctcc ctgtccgcct ctgtgggcga tagggtcacc 60

atcacctgca gtgccagcac aagtataaat tccaatcact tacactggta tcaacagaaa 120

ccaggaaagg cgccgaaact gctgatttac aggacatcca ttctggcttc tggagtccct 180

tctcgcttct ctggttccgg atctgggacg tctttcactc tgaccatcag ctccctgcag 240

ccggaagact tcgcaactta ttactgtcag cagggtagta atatcccatt cactttcgga 300

cagggtacca aggtggagat caaacgt 327

<210> 42
<211> 12
<212> PRT
<213> Homo sapiens

<400> 42

Cys Asn Phe Ser Ser Leu Lys Leu Asn Val Tyr Glu
1 5 10

<210> 43
<211> 27
<212> DNA
<213> Mus musculus

<400> 43
atgggcagac ttacattctc attcctg 27

<210> 44
<211> 20
<212> DNA
<213> Mus musculus

<400> 44
cagtggatag acagatgggg 20

<210> 45
<211> 20
<212> DNA
<213> Mus musculus

<400> 45
actggatggt gggaagatgg 20

<210> 46
<211> 32
<212> DNA

<213> Mus musculus

<400> 46
ctcacccagt ctccaaccac catggctgca tc 32

<210> 47
<211> 96
<212> PRT
<213> Homo sapiens

<400> 47

Gln Val Thr Leu Lys Glu Ser Gly Pro Val Leu Val Lys Pro Thr Glu
1 5 10 15

Thr Leu Thr Leu Thr Cys Thr Val Ser Gly Phe Ser Leu Ser Asn Ala
20 25 30

Arg Met Gly Val Ser Trp Ile Arg Gln Pro Pro Gly Lys Ala Leu Glu
35 40 45

Trp Leu Ala His Ile Phe Ser Asn Asp Glu Lys Ser Tyr Ser Thr Ser
50 55 60

Leu Lys Ser Arg Leu Thr Ile Ser Lys Asp Thr Ser Lys Ser Gln Val
65 70 75 80

Val Leu Thr Met Thr Asn Met Asp Pro Val Asp Thr Ala Thr Tyr Tyr
85 90 95

<210> 48
<211> 98
<212> PRT
<213> Homo sapiens

<400> 48

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val

50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys

<210> 49
<211> 95
<212> PRT
<213> Homo sapiens

<400> 49

Glu Ile Val Leu Thr Gln Ser Pro Asp Phe Gln Ser Val Thr Pro Lys
1 5 10 15

Glu Lys Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Gly Ser Ser
20 25 30

Leu His Trp Tyr Gln Gln Lys Pro Asp Gln Ser Pro Lys Leu Leu Ile
35 40 45

Lys Tyr Ala Ser Gln Ser Phe Ser Gly Val Pro Ser Arg Phe Ser Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Glu Ala
65 70 75 80

Glu Asp Ala Ala Thr Tyr Tyr Cys His Gln Ser Ser Ser Leu Pro
85 90 95