FIGURE 1

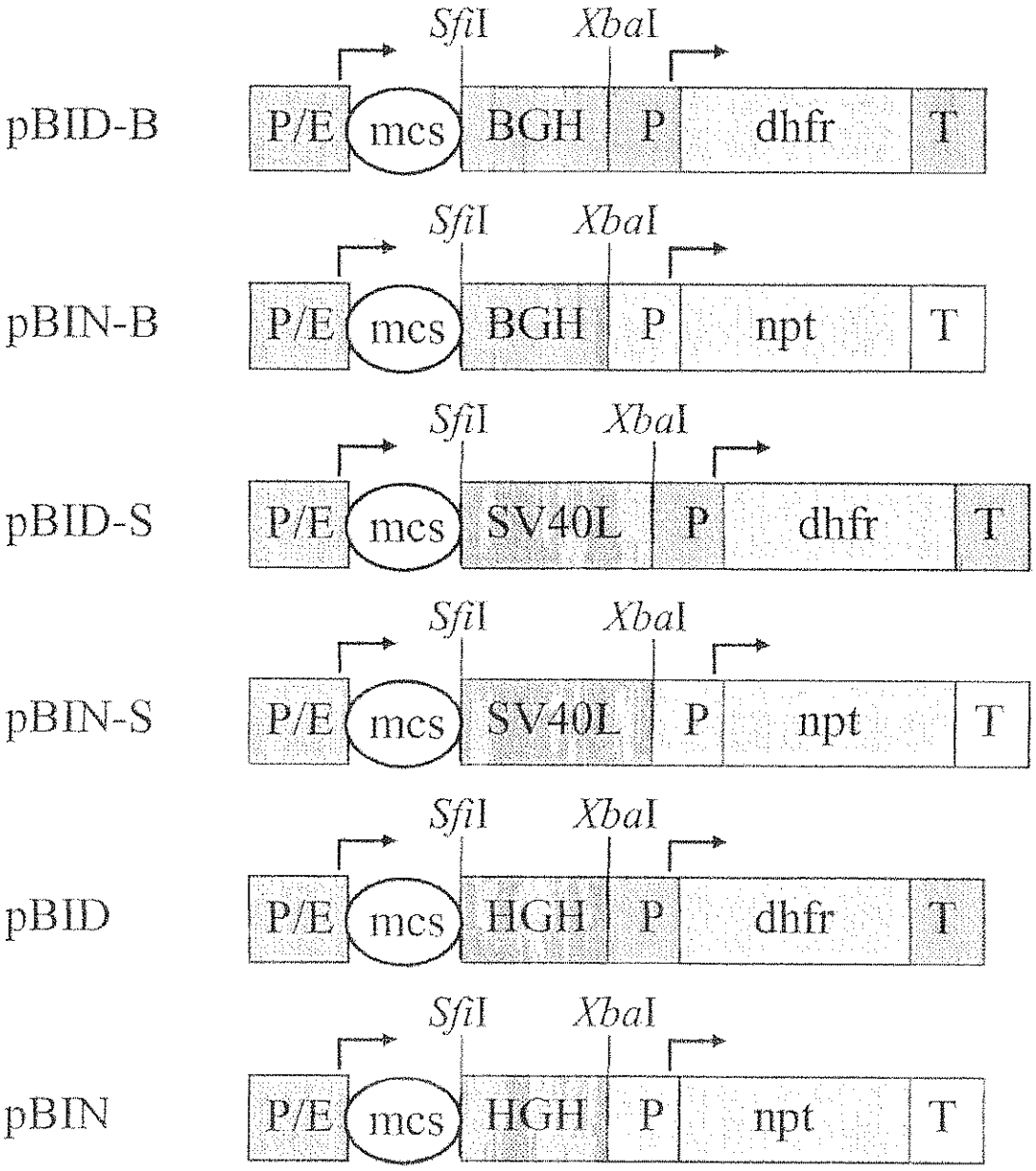

pBID-B
SfiI
XbaI
P/E
mcs
BGH
P
dhfr
T
pBIN-B
SfiI
XbaI
P/E
mcs
BGH
P
npt
T
pBID-S
SfiI
XbaI
P/E
mcs
SV40L
P
dhfr
T
pBIN-S
SfiI
XbaI
P/E
mcs
SV40L
P
npt
T
pBID
SfiI
XbaI
P/E
mcs
HGH
P
dhfr
T
pBIN
SfiI
XbaI
P/E
mcs
HGH
P
npt
T

FIGURE 2

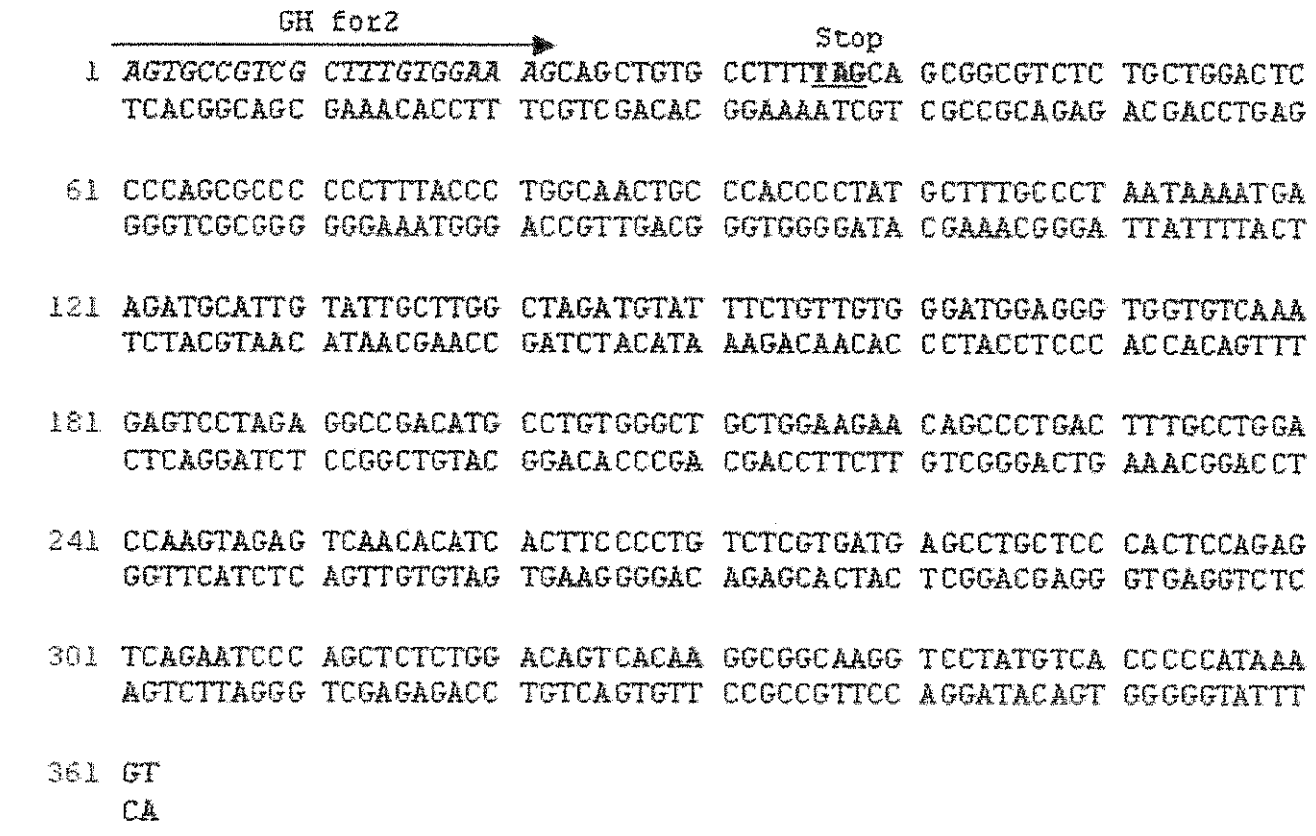

GH for2
Stop
1 AGTGCCGTCG CTTTGTGGAA AGCAGCTGTG CCTTTTTAGCA GCGGCGTCTC TGCTGGACTC
TCACGGCAGC GAAACACCTT TCGTCGACAC GGAAAAATCGT CGCCGCAGAG ACGACCTGAG
61 CCCAGCGCCC CCCTTTACCC TGGCAACTGC CCACCCCTAT GCTTTGCCCT AATAAAATGA
GGGTCGCGGG GGGAAATGGG ACCGTTGACG GGTGGGGATA CGAAACGGGA TTATTTTACT
121 AGATGCATTG TATTGCTTGG CTAGATGTAT TTCTGTTGTG GGATGGAGGG TGGTGTCAAA
TCTACGTAAC ATAACGAACC GATCTACATA AAGACAACAC CCTACCTCCC ACCACAGTTT
181 GAGTCCTAGA GGCCGACATG CCTGTGGGCT GCTGGAAGAA CAGCCCTGAC TTTGCCTGGA
CTCAGGATCT CCGGCTGTAC GGACACCCGA CGACCTTCTT GTCGGGACTG AAACGGACCT
241 CCAAGTAGAG TCAACACATC ACTTCCCCTG TCTCGTGATG AGCCTGCTCC CACTCCAGAG
GGTTCATCTC AGTTGTGTAG TGAAGGGGAC AGAGCACTAC TCGGACGAGG GTGAGGTCTC
301 TCAGAATCCC AGCTCTCTGG ACAGTCACAA GGCGGCAAGG TCCTATGTCA CCCCCATAAA
AGTCTTAGGG TCGAGAGACC TGTCAGTGTT CCGCCGTTCC AGGATACAGT GGGGGTATTT
361 GT
CA

FIGURE 3

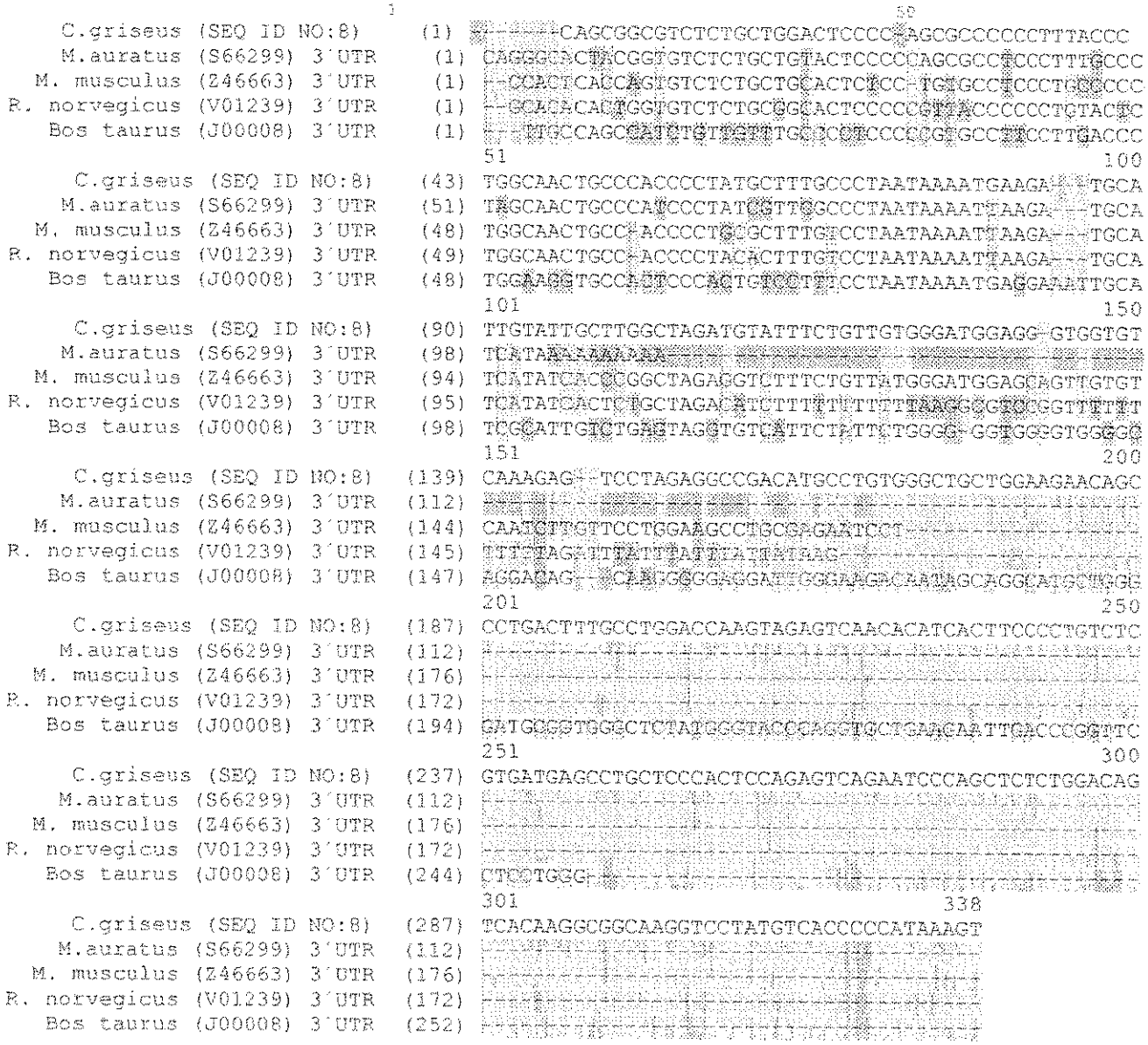

C.griseus (SEQ ID NO:8) (1) ----------CAGCGGCGTCTCTGCTGGACTCCCCAGCGCCCCCCTTTACCC
M.auratus (S66299) 3'UTR (1) CAGGGGACTACGGTGTCTCTGCTGTACTCCCCCAGCGCCTCCCTTTGCCC
M. musculus (Z46663) 3'UTR (1) --CCACTCACCAGTGTCTCTGCTGCACTCTCC-TGTGCCTCCCTGGCCCC
R. norvegicus (V01239) 3'UTR (1) --GCACACACTGGTGTCTCTGCTGCACTCCCCCGTTACCCCCCTGTACTC
Bos taurus (J00008) 3'UTR (1) --TTGCCAGCCATTGTGTTTTTGCCCCTCCCCCGTGCCTTCCTTGACCC
51 100
C.griseus (SEQ ID NO:8) (43) TGGCAACTGCCCACCCCTATGCTTTGCCCTAATAAAATGAAGA---TGCA
M.auratus (S66299) 3'UTR (51) TGGCAACTGCCCACCCCTATGCTTTGCCCTAATAAAATTAAGA---TGCA
M. musculus (Z46663) 3'UTR (48) TGGCAACTGCCCACCCCTGCGCTTTGTCCTAATAAAATTAAGA---TGCA
R. norvegicus (V01239) 3'UTR (49) TGGCAACTGCCCACCCCTACACTTTGTCCTAATAAAATTAAGA---TGCA
Bos taurus (J00008) 3'UTR (48) TGGAAGGTGCCACCTCCCACTGTCCTTTCCTAATAAAATGAGGAAATTGCA
101 150
C.griseus (SEQ ID NO:8) (90) TTGTATTGCTTGGCTAGATGTATTTCTGTTGTGGGATGGAGG-GTGGTGT
M.auratus (S66299) 3'UTR (98) TCATAAAAAAAAAAA----------
M. musculus (Z46663) 3'UTR (94) TCATATCACCGGCTAGAGGTCTTTCTGTTATGGGATGGAGCAGTTGTGT
R. norvegicus (V01239) 3'UTR (95) TCATATCACTCTGCTAGACATCTTTTTTTTTTTTAAGGCGTCCGGTTTTTT
Bos taurus (J00008) 3'UTR (98) TCGCATTGTCTGAGTAGTGTGTCATTCTATTCTGGGG-GGTGGGGTGGGGCG
151 200
C.griseus (SEQ ID NO:8) (139) CAAAGAG--TCCTAGAGGCCGACATGCCTGTGGGCTGCTGGAAGAACAGC
M.auratus (S66299) 3'UTR (112) ----------
M. musculus (Z46663) 3'UTR (144) CAATCTTGTTCCTGGAAGCCTGCCAGAATCCT----------
R. norvegicus (V01239) 3'UTR (145) TTTTAG-TTTATTTATTTATTTATTAAG----------
Bos taurus (J00008) 3'UTR (147) ACGACAG--CCAGTGGGAGGATTGGGAAGACAATAGCAGGCATGCTGGG
201 250
C.griseus (SEQ ID NO:8) (187) CCTGACTTTGCCTGGACCAAGTAGAGTCAACACATCACTTCCCCTGTCTC
M.auratus (S66299) 3'UTR (112) ----------
M. musculus (Z46663) 3'UTR (176) ----------
R. norvegicus (V01239) 3'UTR (172) ----------
Bos taurus (J00008) 3'UTR (194) CATGCGGTGGCTCTATGGGTACCCAGGTGCTGAAGAATTGACCCGGTTC
251 300
C.griseus (SEQ ID NO:8) (237) GTGATGAGCCTGCTCCCACTCCAGAGTCAGAATCCCAGCTCTCTGGACAG
M.auratus (S66299) 3'UTR (112) ----------
M. musculus (Z46663) 3'UTR (176) ----------
R. norvegicus (V01239) 3'UTR (172) ----------
Bos taurus (J00008) 3'UTR (244) CTCCTGGG----------
301 338
C.griseus (SEQ ID NO:8) (287) TCACAAGGCGGCAAGGTCCTATGTCACCCCCATAAAGT
M.auratus (S66299) 3'UTR (112) ----------
M. musculus (Z46663) 3'UTR (176) ----------
R. norvegicus (V01239) 3'UTR (172) ----------
Bos taurus (J00008) 3'UTR (252) ----------

FIGURE 4

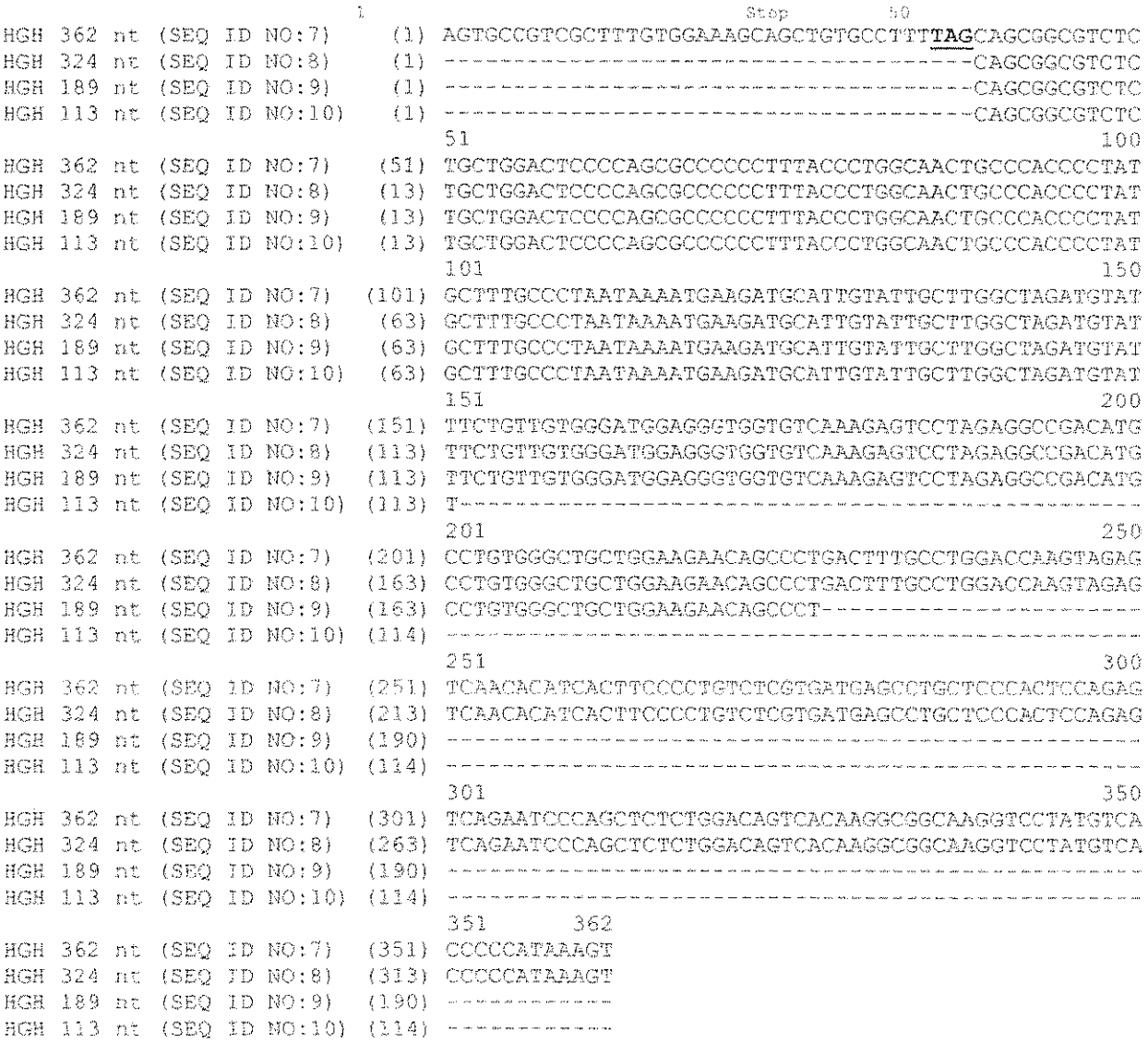

1
Stop
50
HGH 362 nt (SEQ ID NO:7) (1) AGTGCCGTCGCTTTGTGGAAAGCAGCTGTGCCTTTTAGCAGCGGCGTCTC
HGH 324 nt (SEQ ID NO:8) (1) ----------CAGCGGCGTCTC
HGH 189 nt (SEQ ID NO:9) (1) ----------CAGCGGCGTCTC
HGH 113 nt (SEQ ID NO:10) (1) ----------CAGCGGCGTCTC
51 100
HGH 362 nt (SEQ ID NO:7) (51) TGCTGGACTCCCCAGCGCCCCCCTTTACCCTGGCAACTGCCCACCCCTAT
HGH 324 nt (SEQ ID NO:8) (13) TGCTGGACTCCCCAGCGCCCCCCTTTACCCTGGCAACTGCCCACCCCTAT
HGH 189 nt (SEQ ID NO:9) (13) TGCTGGACTCCCCAGCGCCCCCCTTTACCCTGGCAACTGCCCACCCCTAT
HGH 113 nt (SEQ ID NO:10) (13) TGCTGGACTCCCCAGCGCCCCCCTTTACCCTGGCAACTGCCCACCCCTAT
101 150
HGH 362 nt (SEQ ID NO:7) (101) GCTTTGCCCTAATAAAATGAAGATGCATTGTATTGCTTGGCTAGATGTAT
HGH 324 nt (SEQ ID NO:8) (63) GCTTTGCCCTAATAAAATGAAGATGCATTGTATTGCTTGGCTAGATGTAT
HGH 189 nt (SEQ ID NO:9) (63) GCTTTGCCCTAATAAAATGAAGATGCATTGTATTGCTTGGCTAGATGTAT
HGH 113 nt (SEQ ID NO:10) (63) GCTTTGCCCTAATAAAATGAAGATGCATTGTATTGCTTGGCTAGATGTAT
151 200
HGH 362 nt (SEQ ID NO:7) (151) TTCTGTTGTGGGATGGAGGGTGGTGTCAAAGAGTCCTAGAGGCCGACATG
HGH 324 nt (SEQ ID NO:8) (113) TTCTGTTGTGGGATGGAGGGTGGTGTCAAAGAGTCCTAGAGGCCGACATG
HGH 189 nt (SEQ ID NO:9) (113) TTCTGTTGTGGGATGGAGGGTGGTGTCAAAGAGTCCTAGAGGCCGACATG
HGH 113 nt (SEQ ID NO:10) (113) T----------
201 250
HGH 362 nt (SEQ ID NO:7) (201) CCTGTGGGCTGCTGGAAGAACAGCCCTGACTTTGCCTGGACCAAGTAGAG
HGH 324 nt (SEQ ID NO:8) (163) CCTGTGGGCTGCTGGAAGAACAGCCCTGACTTTGCCTGGACCAAGTAGAG
HGH 189 nt (SEQ ID NO:9) (163) CCTGTGGGCTGCTGGAAGAACAGCCCT----------
HGH 113 nt (SEQ ID NO:10) (114) ----------
251 300
HGH 362 nt (SEQ ID NO:7) (251) TCAACACATCACTTCCCCTGTCTCGTGATGAGCCTGCTCCCACTCCAGAG
HGH 324 nt (SEQ ID NO:8) (213) TCAACACATCACTTCCCCTGTCTCGTGATGAGCCTGCTCCCACTCCAGAG
HGH 189 nt (SEQ ID NO:9) (190) ----------
HGH 113 nt (SEQ ID NO:10) (114) ----------
301 350
HGH 362 nt (SEQ ID NO:7) (301) TCAGAATCCCAGCTCTCTGGACAGTCACAAGGCGGCAAGGTCCTATGTCA
HGH 324 nt (SEQ ID NO:8) (263) TCAGAATCCCAGCTCTCTGGACAGTCACAAGGCGGCAAGGTCCTATGTCA
HGH 189 nt (SEQ ID NO:9) (190) ----------
HGH 113 nt (SEQ ID NO:10) (114) ----------
351 362
HGH 362 nt (SEQ ID NO:7) (351) CCCCCATAAAGT
HGH 324 nt (SEQ ID NO:8) (313) CCCCCATAAAGT
HGH 189 nt (SEQ ID NO:9) (190) ------------
HGH 113 nt (SEQ ID NO:10) (114) ------------

FIGURE 5

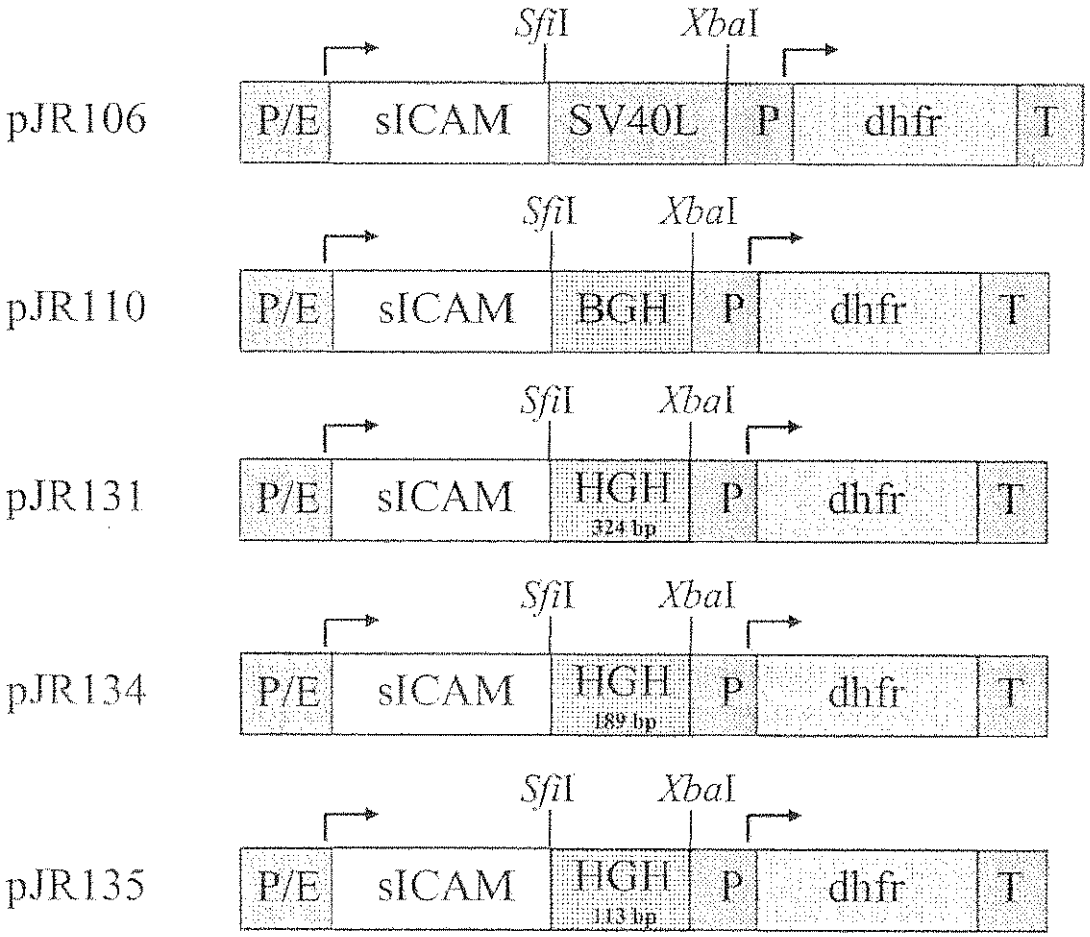

SfiI
XbaI
pJR106
P/E
sICAM
SV40L
P
dhfr
T
SfiI
XbaI
pJR110
P/E
sICAM
BGH
P
dhfr
T
SfiI
XbaI
pJR131
P/E
sICAM
HGH
324 bp
P
dhfr
T
SfiI
XbaI
pJR134
P/E
sICAM
HGH
189 bp
P
dhfr
T
SfiI
XbaI
pJR135
P/E
sICAM
HGH
113 bp
P
dhfr
T

FIGURE 6

Vector	Termination Sequence	Transient Transfection #1 (n=2)	Transient Transfection #2 (n=2)
pJR106	SV40 late (SEQ ID NO: 11)	193 ng/mL sICAM	207 ng/mL sICAM
pJR110	BGH (SEQ ID NO: 12)	222 ng/mL sICAM	234 ng/mL sICAM
pJR131	HGH (SEQ ID NO: 8)	269 ng/mL sICAM	257 ng/mL sICAM

FIGURE 7

Vector combination	Termination Sequence	Transient Transfection (n=6)
pBID-B/IgG4 + pBIN-B/kappa	BGH (SEQ ID NO: 12)	40 $\pm$ 6 ng/mL IgG4
pBID/IgG4 + pBIN/kappa	HGH (SEQ ID NO: 8)	54 $\pm$ 8 ng/mL IgG4

FIGURE 8

Vector	HGH Sequence (3´UTR)	Transient Transfection #1 (n=2)	Transient Transfection #2 (n=2)
pJR131	bp 1 – 324 (SEQ ID NO: 8)	111 ng/mL sICAM	108 ng/mL sICAM
pJR134	bp 1- 189 (SEQ ID NO: 9)	98 ng/mL sICAM	83 ng/mL sICAM
pJR135	bp 1- 113 (SEQ ID NO: 10)	25 ng/mL sICAM	25 ng/mL sICAM

FIGURE 9

Product	Cell Clone/ Cell Pool	Specific Productivity (pg/cell/day)	Titer in Fed Batch Process
IgG1 (1)	cell clone	23	6.3 g/L (40 L bioreactor)
IgG1 (2)	cell pool (800 nM MTX)	32	2.5 g/L (shake flask)
IgG2	cell clone	10	2.1 g/L (2 L bioreactor)
IgG4	cell pool (800 nM MTX)	44	2.1 g/L (shake flask)
Fc fusion protein (IgG1)	cell pool (800 nM MTX)	45	3.9 g/L (shake flask)
Fc fusion protein (IgG2)	cell pool (800 nM MTX)	34	3.4 g/L (shake flask)