Figure 1

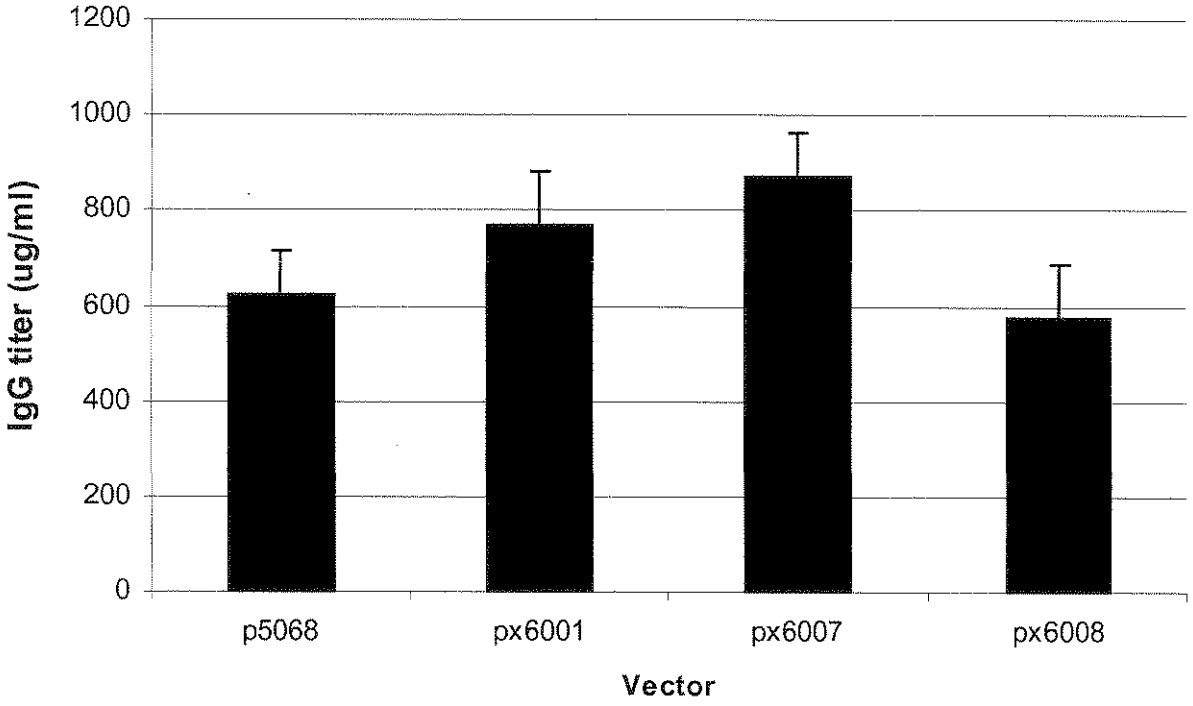

1200
1000
800
600
400
200
0
IgG titer (ug/ml)
p5068
px6001
px6007
px6008
Vector

Figure 2

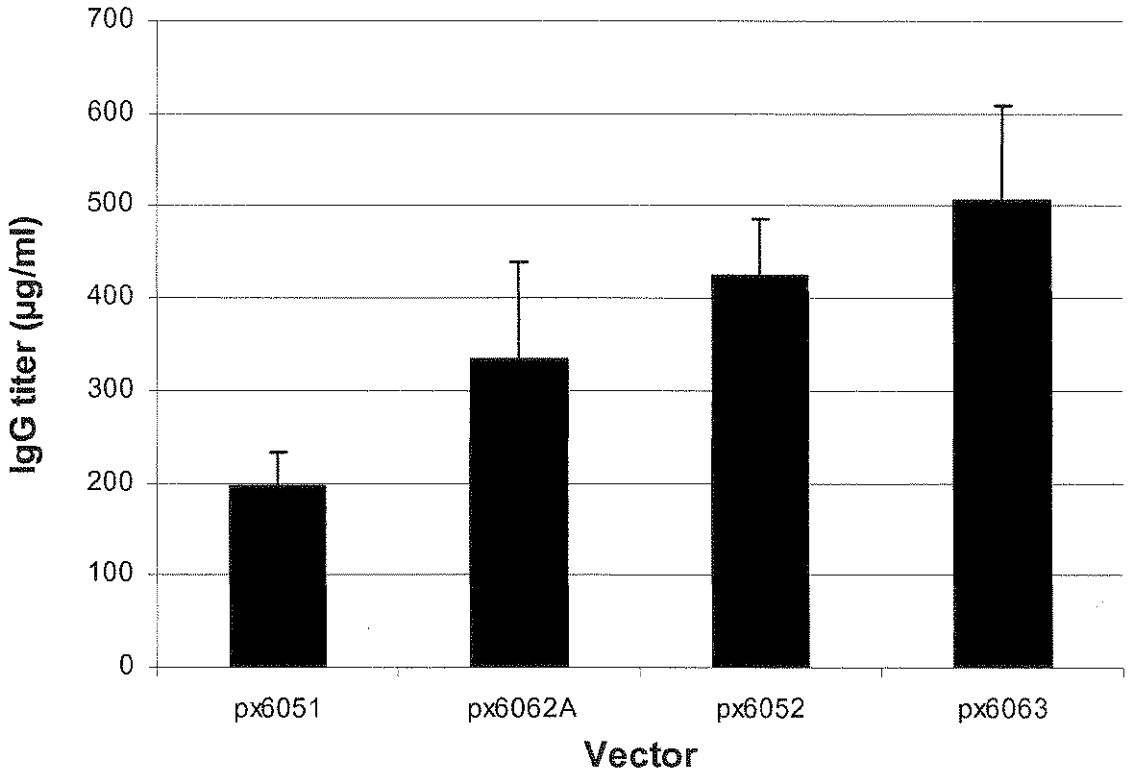

700
600
500
400
300
200
100
0
IgG titer (µg/ml)
px6051
px6062A
px6052
px6063
Vector

Figure 3

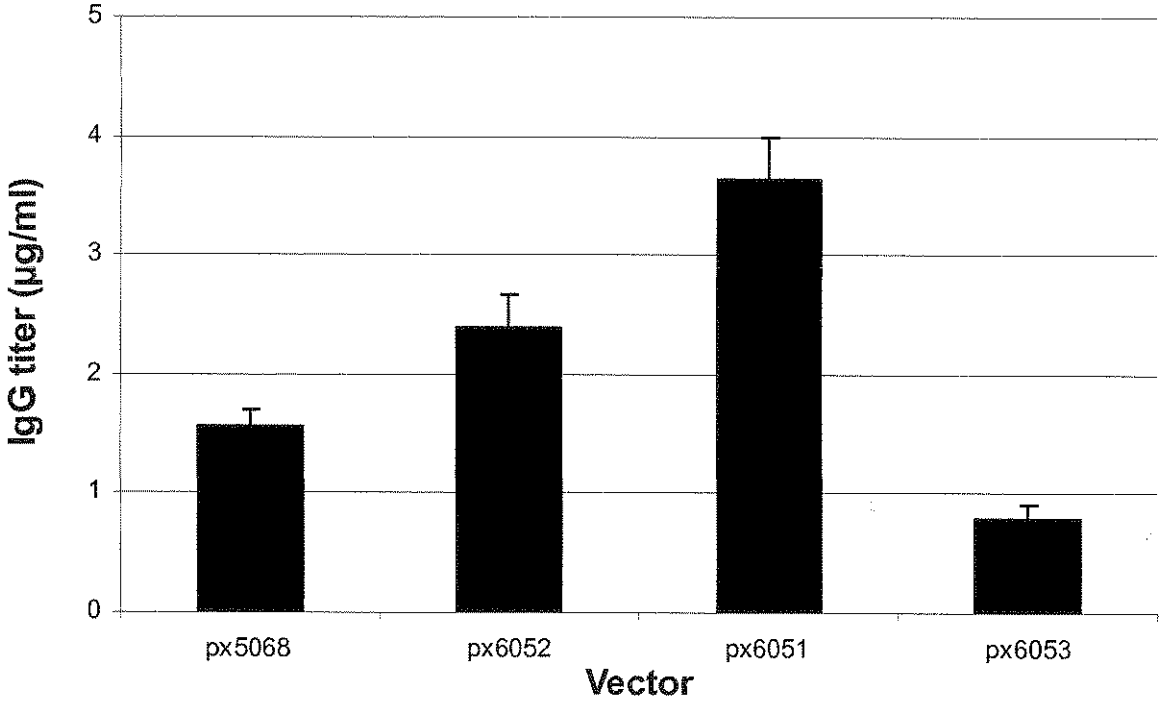


Figure 4

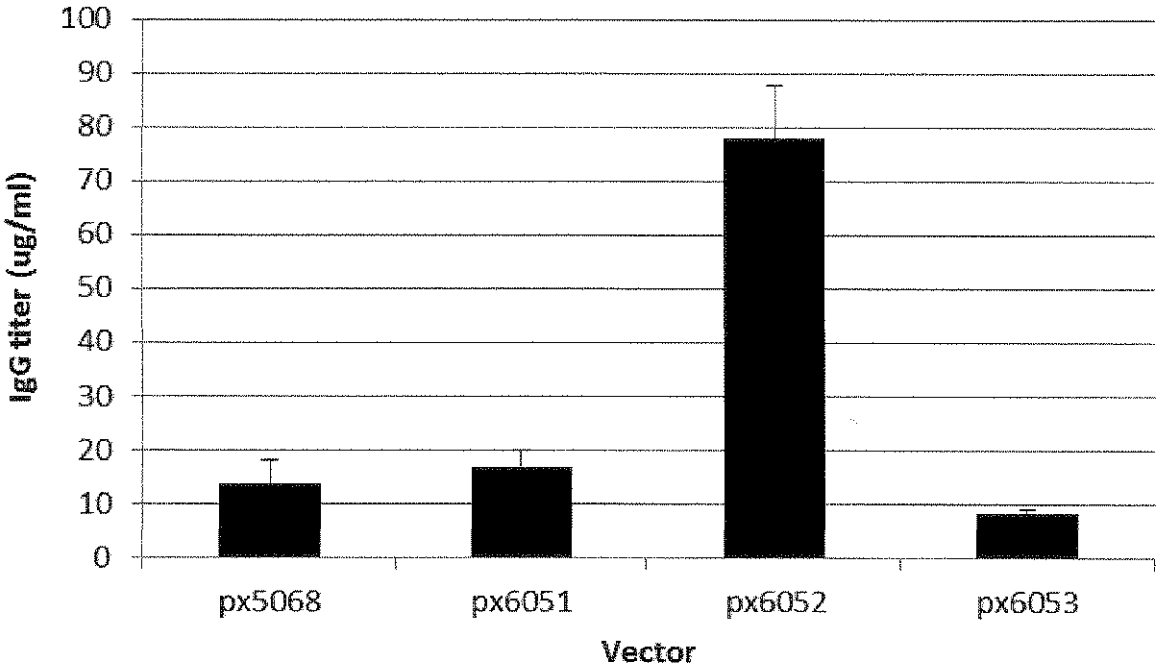

100
90
80
70
60
50
40
30
20
10
0
IgG titer (ug/ml)
px5068
px6051
px6052
px6053
Vector

Figure 5

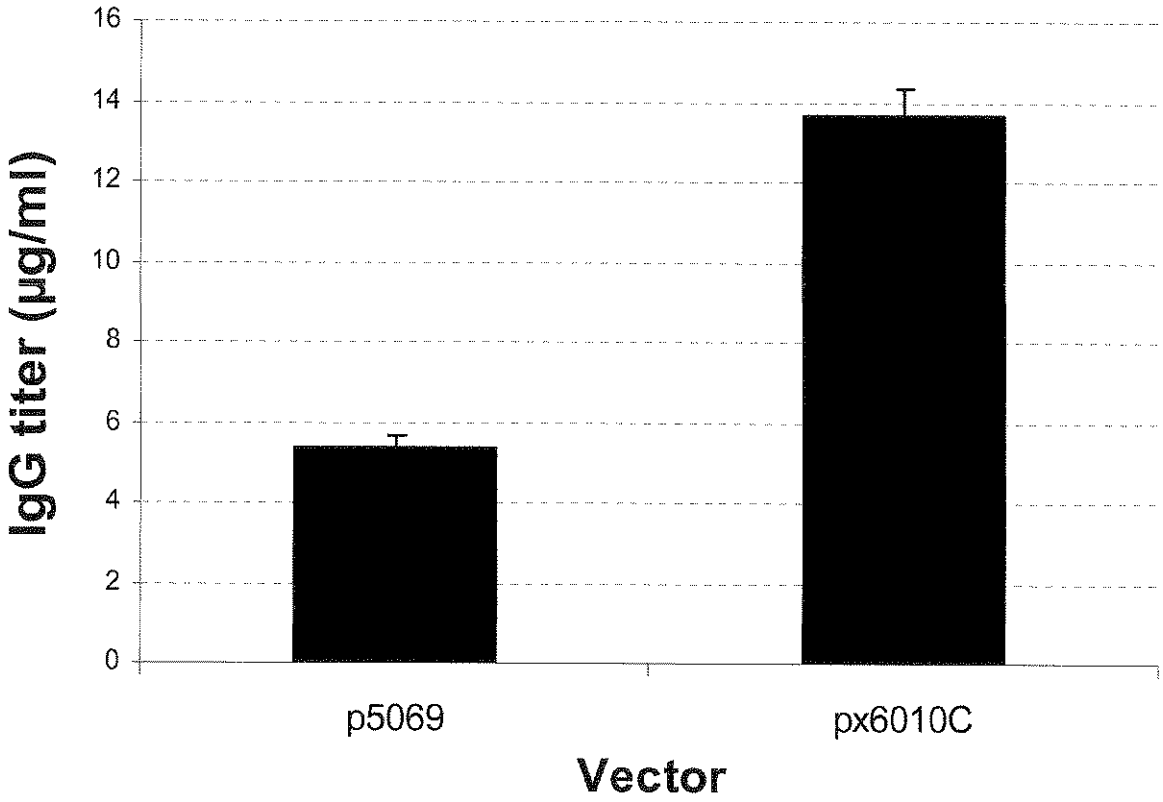


Figure 6

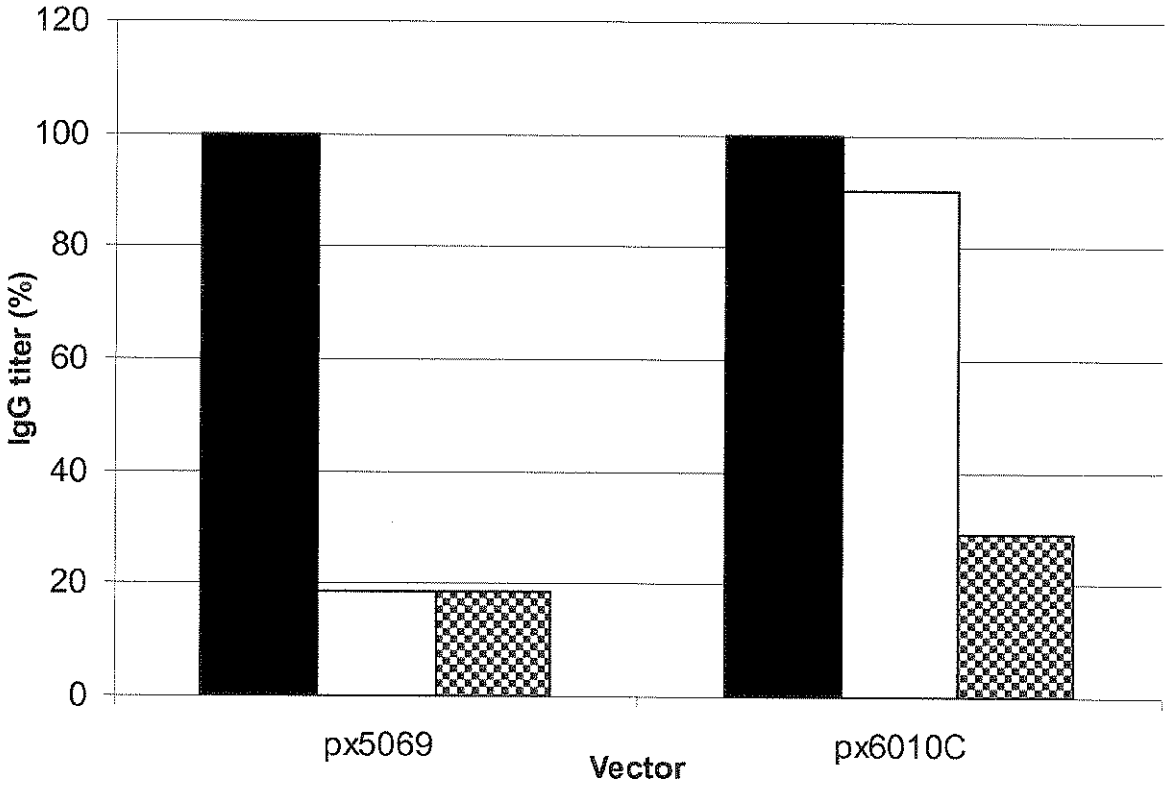


Figure 7

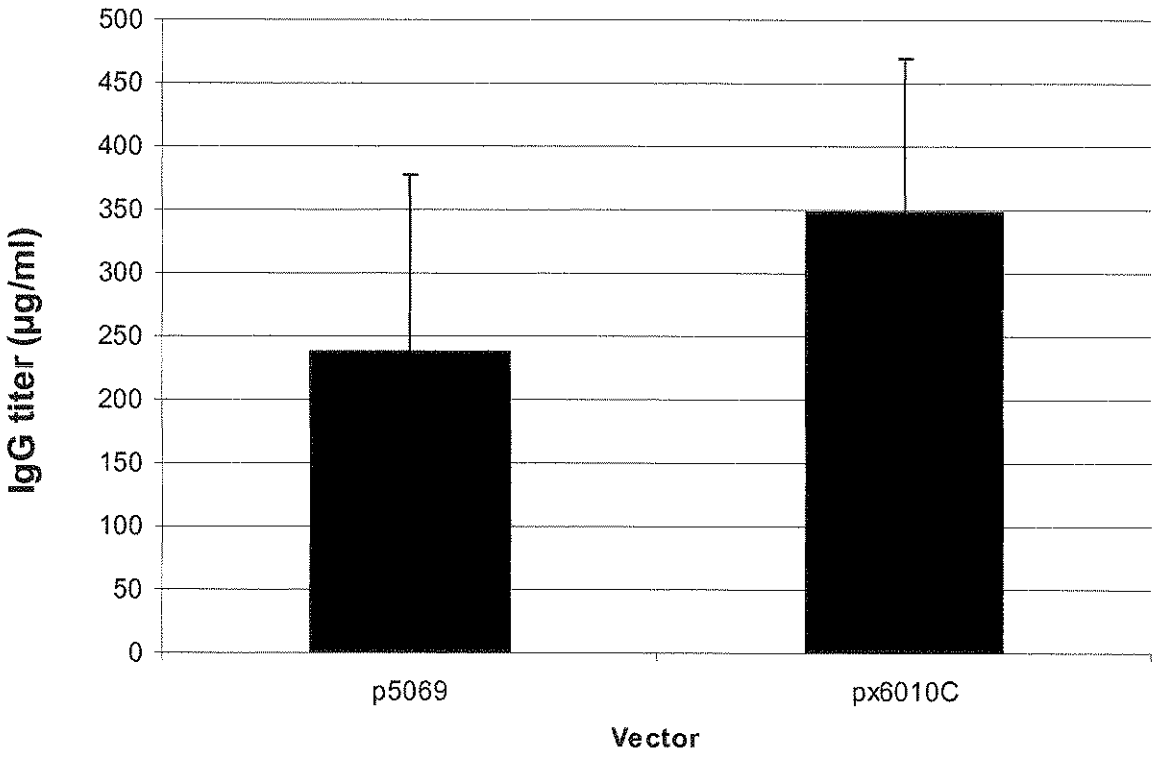

500
450
400
350
300
250
200
150
100
50
0
IgG titer (µg/ml)
p5069
px6010C
Vector

Figure 8

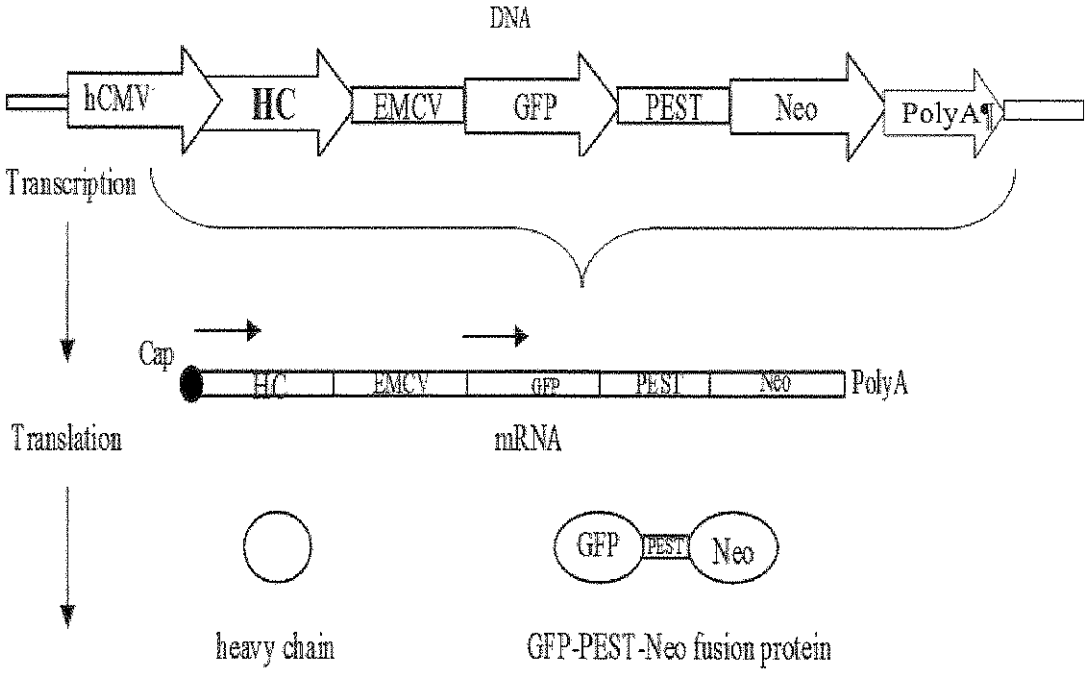

DNA
hCMV
HC
EMCV
GFP
PEST
Neo
PolyA
Transcription
Cap
HC
EMCV
GFP
PEST
Neo
PolyA
Translation
mRNA
GFP
PEST
Neo
heavy chain
GFP-PEST-Neo fusion protein

Figure 9

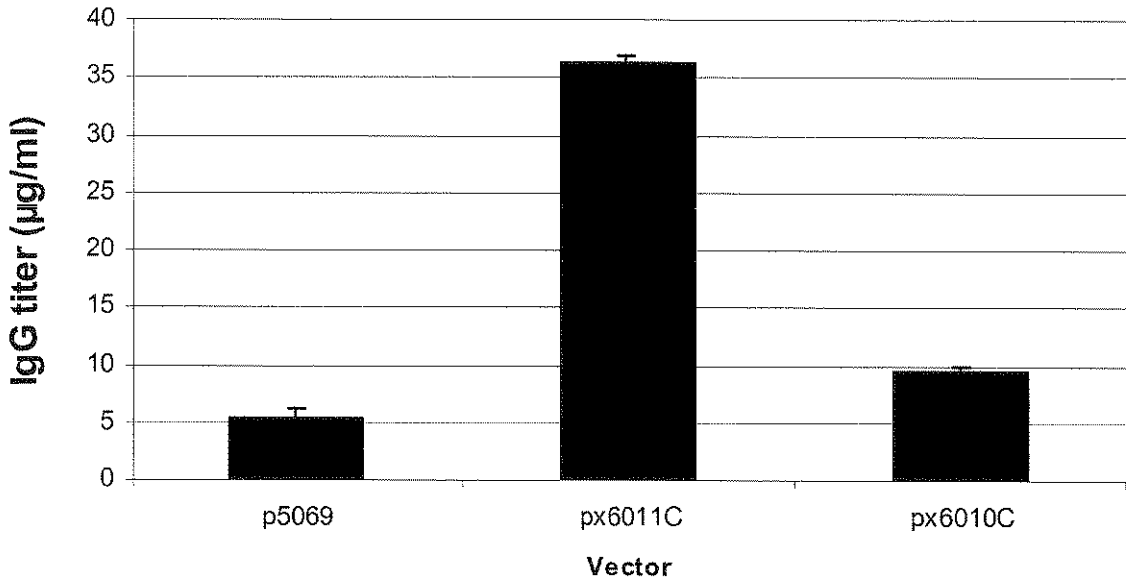
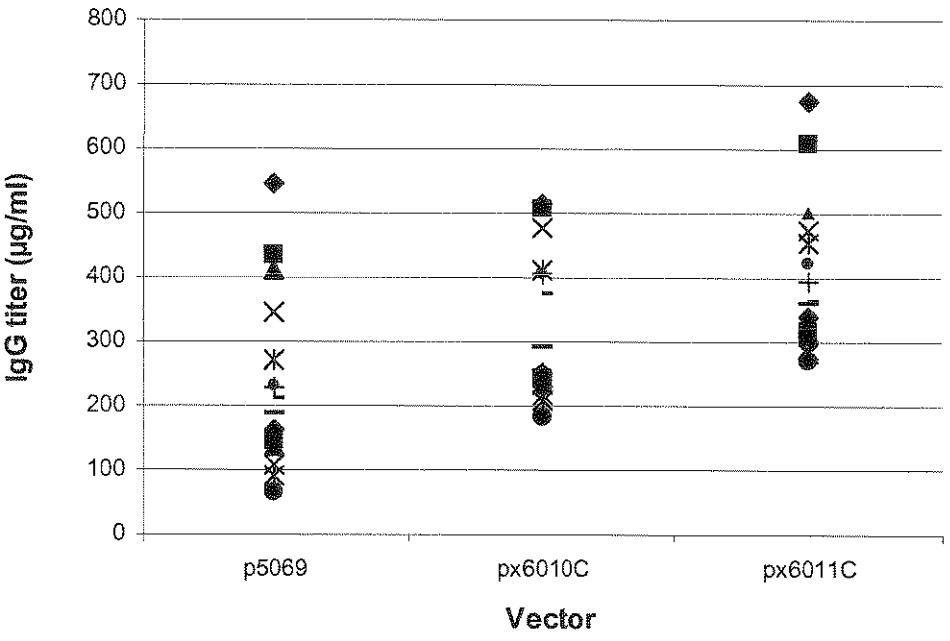

40
35
30
25
20
15
10
5
0
IgG titer (µg/ml)
p5069
px6011C
px6010C
Vector

Figure 10

A


800
700
600
500
400
300
200
100
0
IgG titer (µg/ml)
p5069
px6010C
px6011C
Vector

B

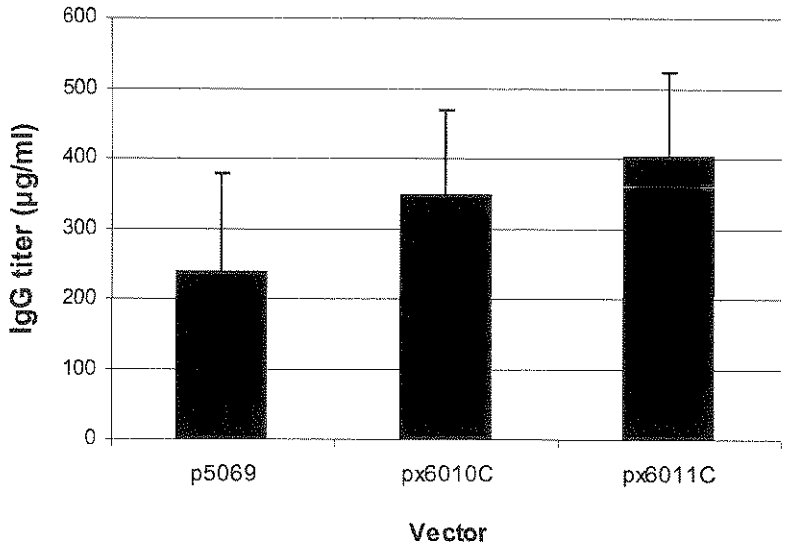
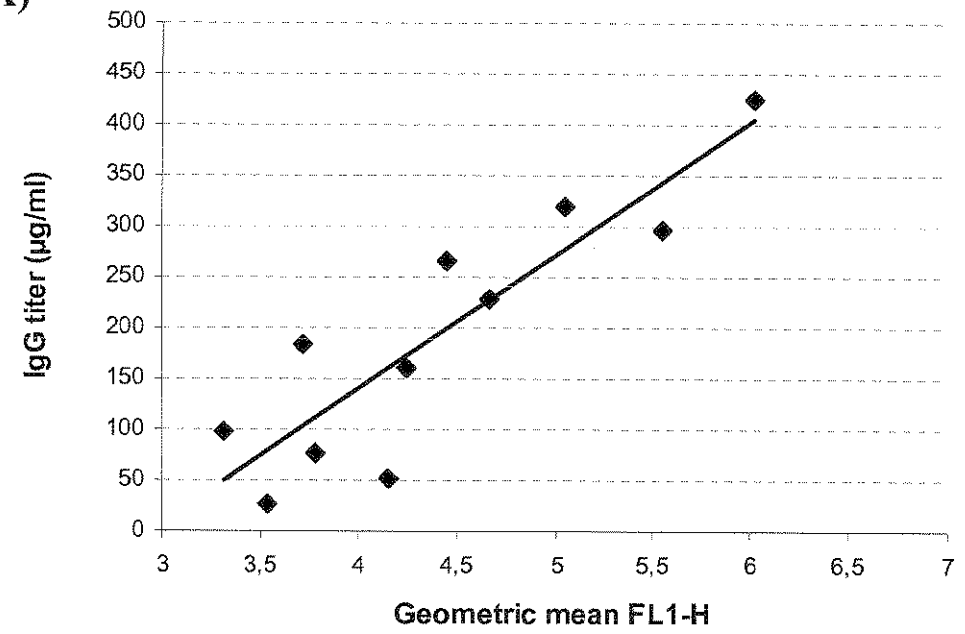

600
500
400
300
200
100
0
IgG titer (µg/ml)
p5069
px6010C
px6011C
Vector

Figure 11

(A)


IgG titer (µg/ml)
500
450
400
350
300
250
200
150
100
50
0
3
3,5
4
4,5
5
5,5
6
6,5
7
Geometric mean FL1-H

(B)

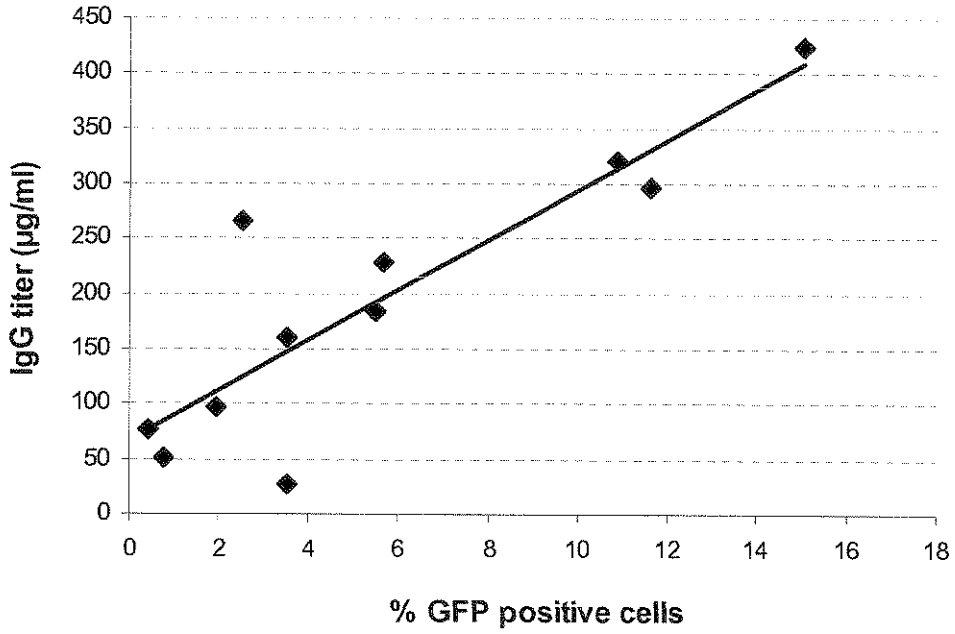

IgG titer (µg/ml)
450
400
350
300
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
% GFP positive cells

Figure 12

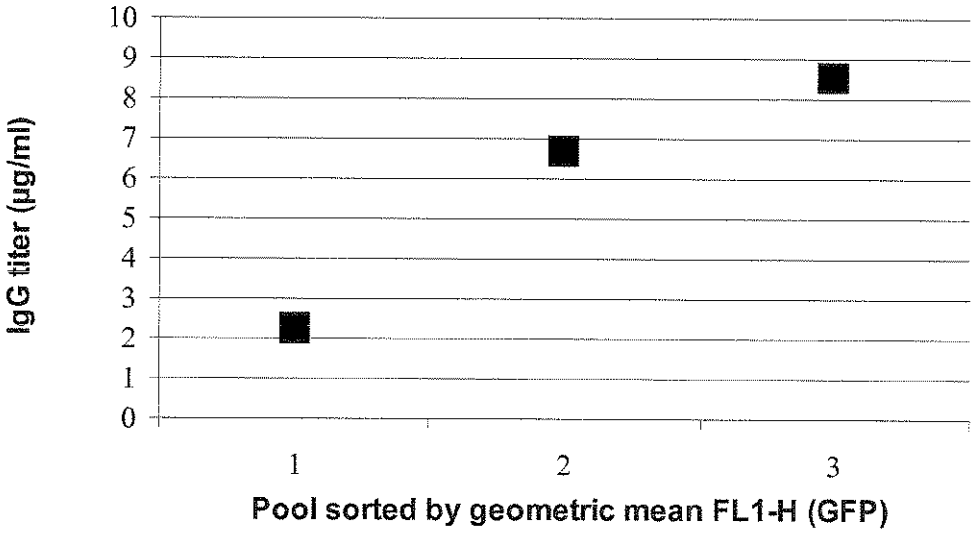

IgG titer (µg/ml)
10
9
8
7
6
5
4
3
2
1
0
1
2
3
Pool sorted by geometric mean FL1-H (GFP)

Figure 13

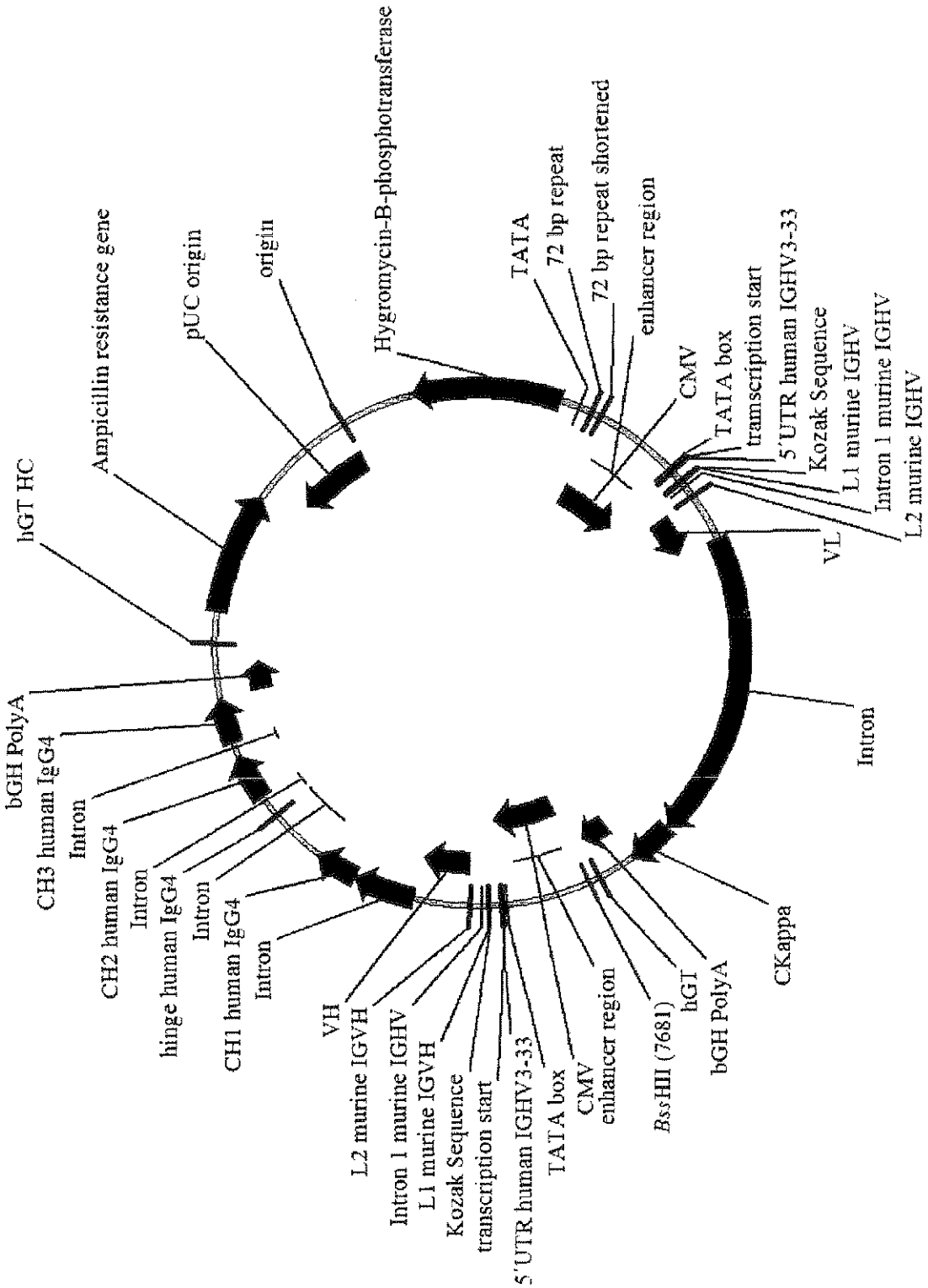

bGT HC
Ampicillin resistance gene
pUC origin
origin
Hygromycin-B-phosphotransferase
TATA
72 bp repeat
72 bp repeat shortened
enhancer region
CMV
TATA box
tramscription start
5'UTR human IGHV3-33
Kozak Sequence
L1 murine IGHV
Intron 1 murine IGHV
L2 murine IGHV
VL
Intron
CKappa
bGH PolyA
bGT
BssHII (7681)
CMV
enhancer region
TATA box
5'UTR human IGHV3-33
transcription start
Kozak Sequence
L1 murine IGVH
Intron 1 murine IGHV
L2 murine IGVH
VH
Intron
CH1 human IgG4
Intron
hinge human IgG4
Intron
CH2 human IgG4
Intron
CH3 human IgG4
Intron
bGH PolyA

Figure 14

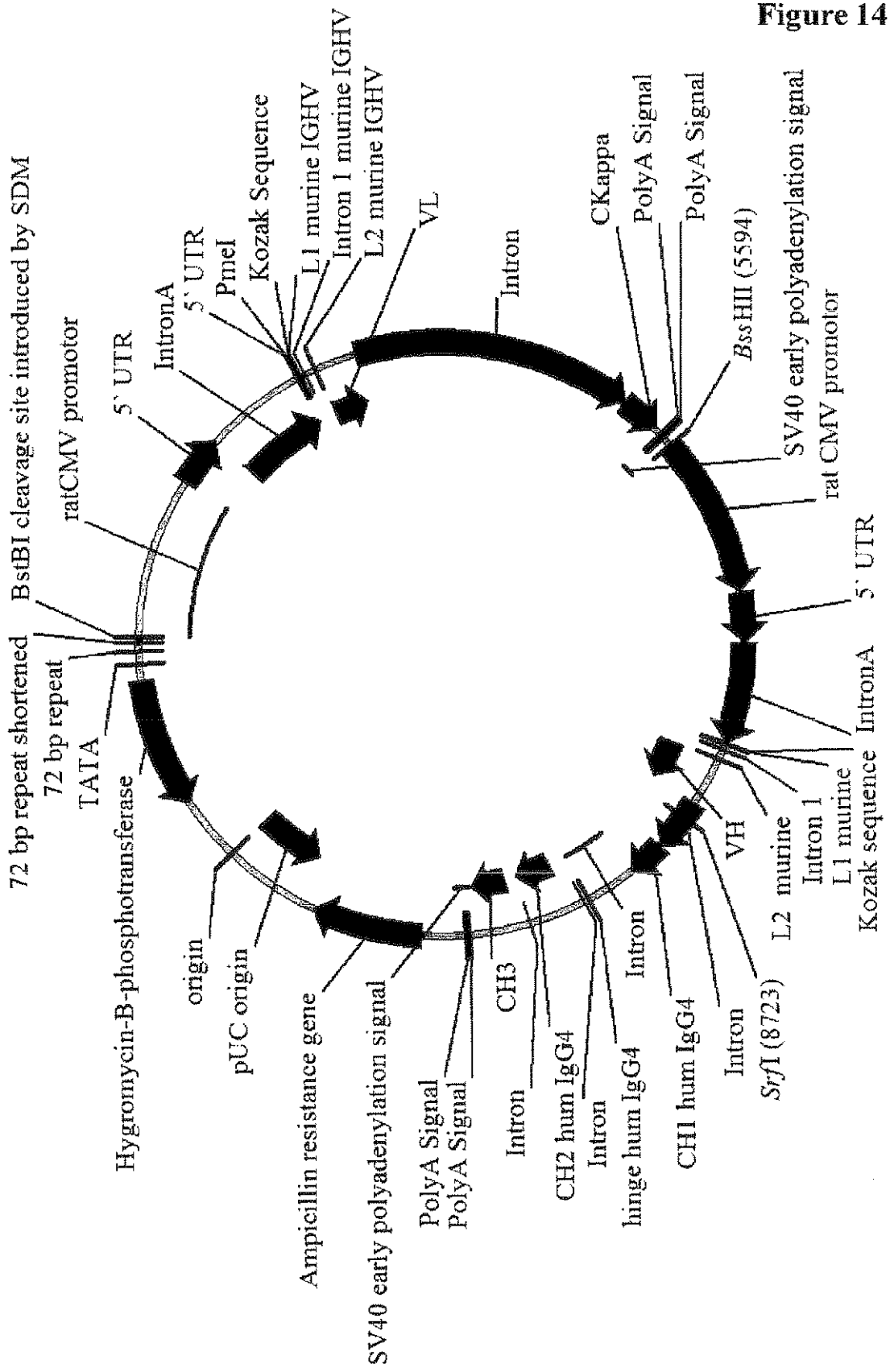
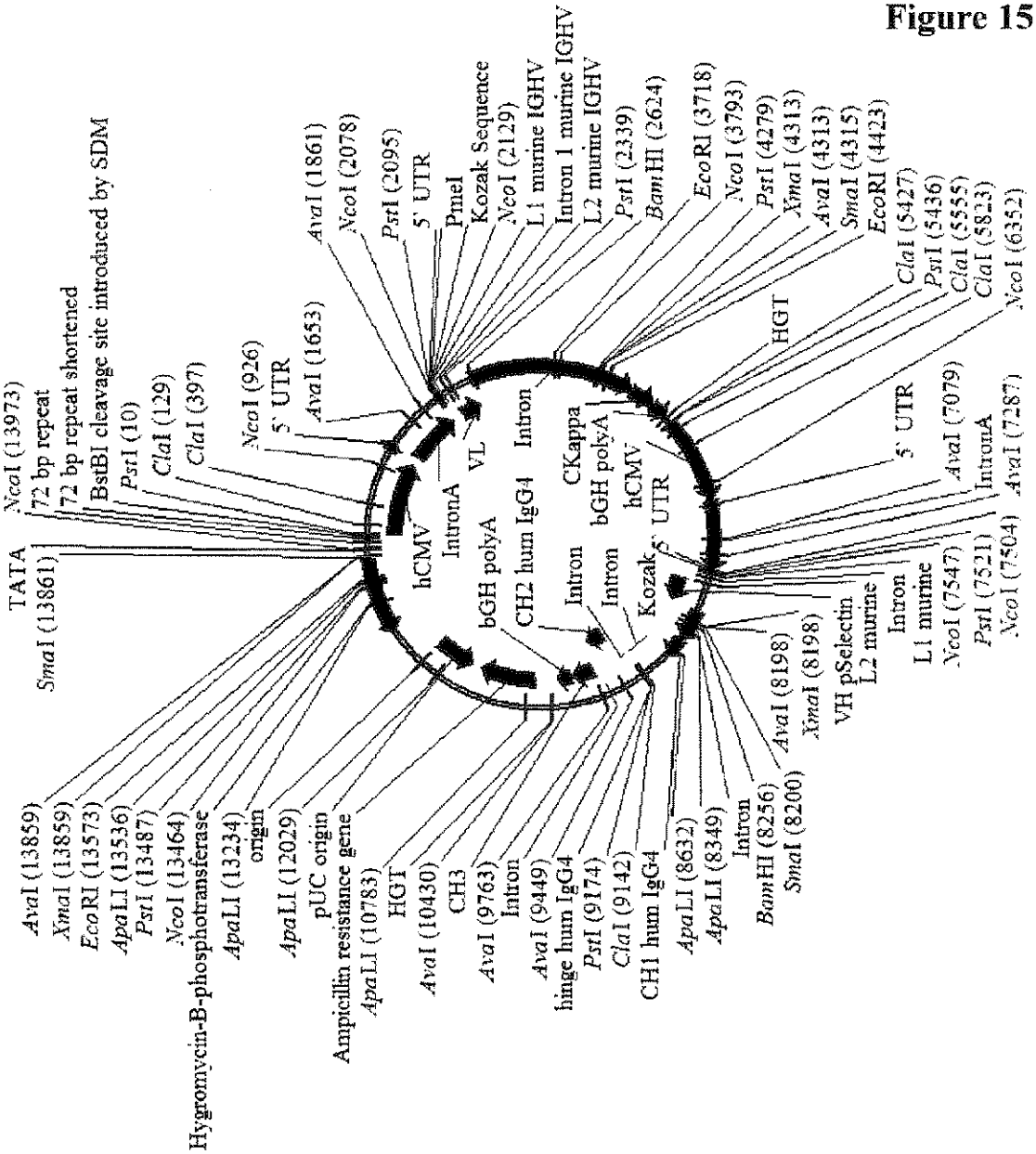

72 bp repeat shortened
BstBI cleavage site introduced by SDM
72 bp repeat
ratCMV promotor
TATA
5' UTR
Hygromycin-B-phosphotransferase
IntronA
origin
5' UTR
pUC origin
PmeI
Ampicillin resistance gene
Kozak Sequence
SV40 early polyadenylation signal
L1 murine IGHV
PolyA Signal
Intron 1 murine IGHV
PolyA Signal
L2 murine IGHV
Intron
VL
CKappa
Intron
PolyA Signal
CH2 hum IgG4
PolyA Signal
Intron
BssHII (5594)
hinge hum IgG4
SV40 early polyadenylation signal
Intron
rat CMV promotor
CH1 hum IgG4
5' UTR
Intron
IntronA
SrfI (8723)
VH
L2 murine
Intron 1
L1 murine
Kozak sequence

Figure 15


NcoI (13973)
72 bp repeat
72 bp repeat shortened
BstBI cleavage site introduced by SDM
PstI (10)
ClaI (129)
ClaI (397)
NcoI (926)
5' UTR
AvaI (1653)
AvaI (1861)
NcoI (2078)
PstI (2095)
5' UTR
PmeI
Kozak Sequence
NcoI (2129)
L1 murine IGHV
Intron 1 murine IGHV
L2 murine IGHV
PstI (2339)
BamHI (2624)
EcoRI (3718)
NcoI (3793)
PstI (4279)
XmaI (4313)
AvaI (4313)
SmaI (4315)
EcoRI (4423)
ClaI (5427)
PstI (5436)
ClaI (5555)
ClaI (5823)
NcoI (6352)
AvaI (7287)
IntronA
AvaI (7079)
5' UTR
HGT
TATA
SmaI (13861)
hCMV
IntronA
VL
Intron
CKappa
bGH polyA
hCMV
5' UTR
Kozak
Intron
CH2 hum IgG4
bGH polyA
Intron
L1 murine
NcoI (7547)
PstI (7521)
NcoI (7504)
Intron
L2 murine
VH pSelectin
AvaI (8198)
XmaI (8198)
SmaI (8200)
BamHI (8256)
Intron
ApaLI (8349)
ApaLI (8632)
CH1 hum IgG4
ClaI (9142)
PstI (9174)
hinge hum IgG4
Intron
AvaI (9449)
Intron
AvaI (9763)
CH3
AvaI (10430)
HGT
ApaLI (10783)
Ampicillin resistance gene
pUC origin
ApaLI (12029)
origin
ApaLI (13234)
Hygromycin-B-phosphotransferase
NcoI (13464)
PstI (13487)
ApaLI (13536)
EcoRI (13573)
XmaI (13859)
AvaI (13859)