Figure 1

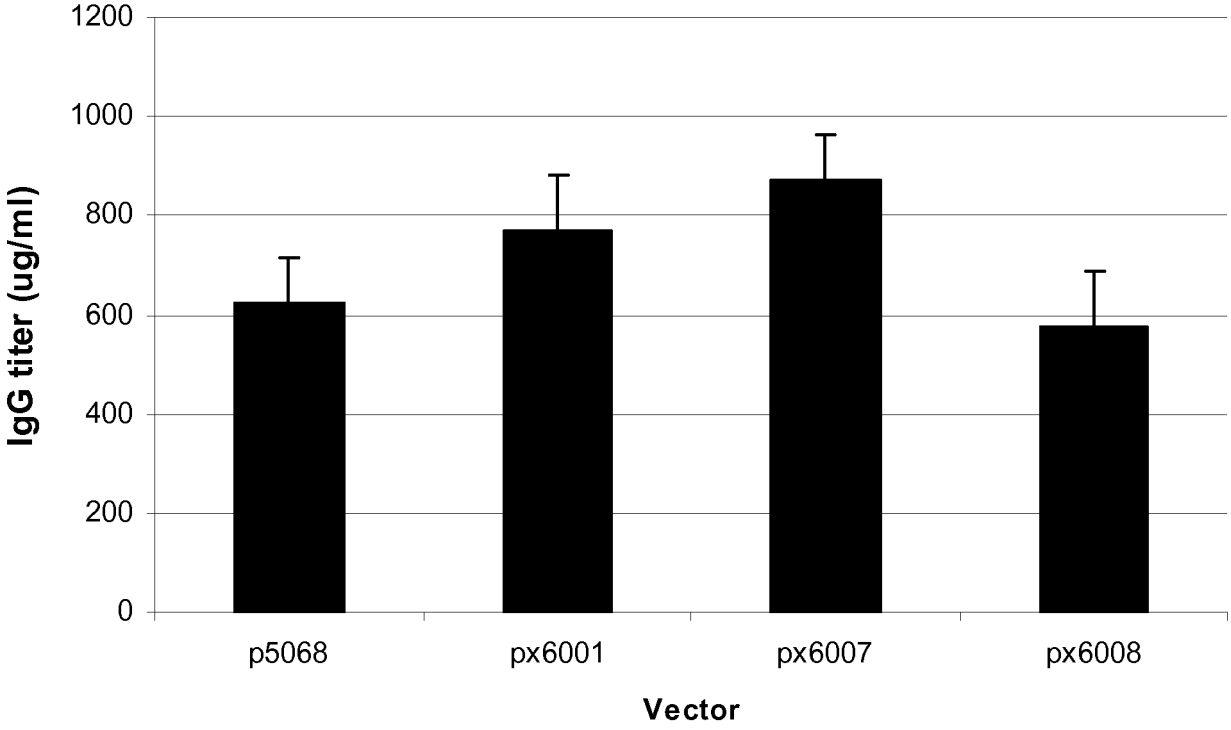

1200
1000
800
600
400
200
0
IgG titer (ug/ml)
p5068
px6001
px6007
px6008
Vector

Figure 2

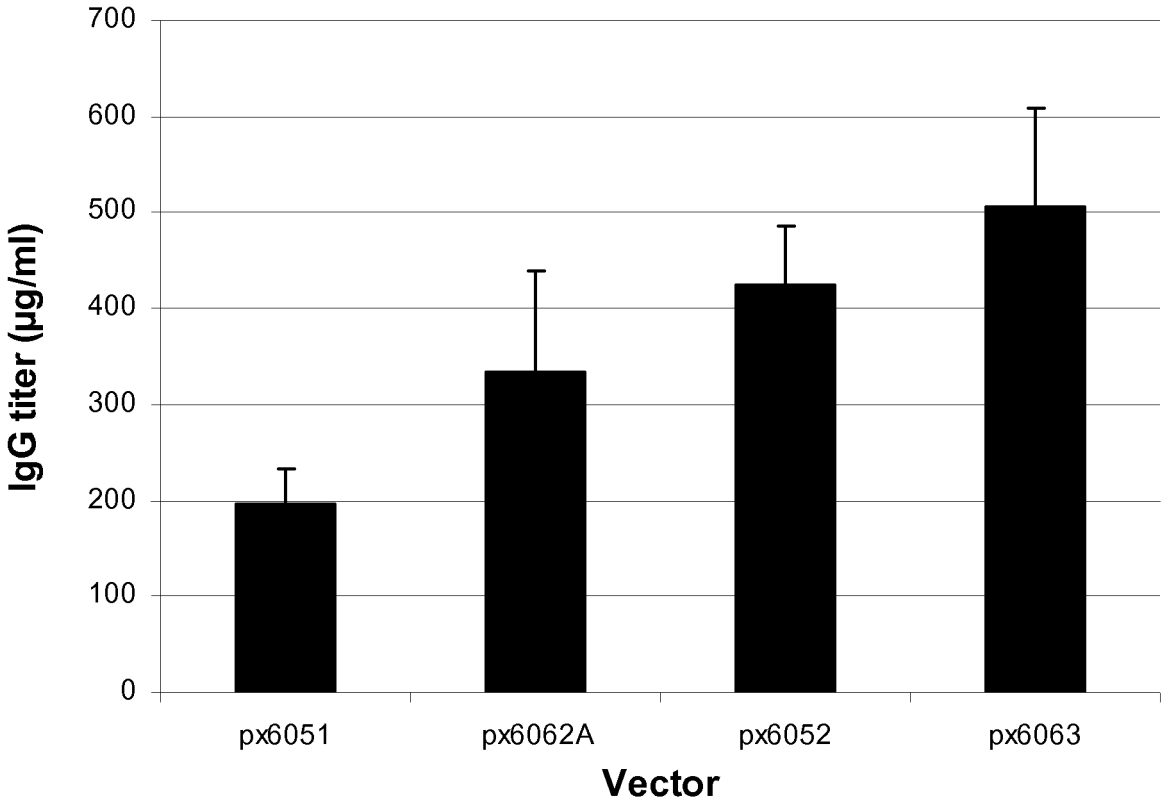

700
600
500
400
300
200
100
0
IgG titer (µg/ml)
px6051
px6062A
px6052
px6063
Vector

Figure 3

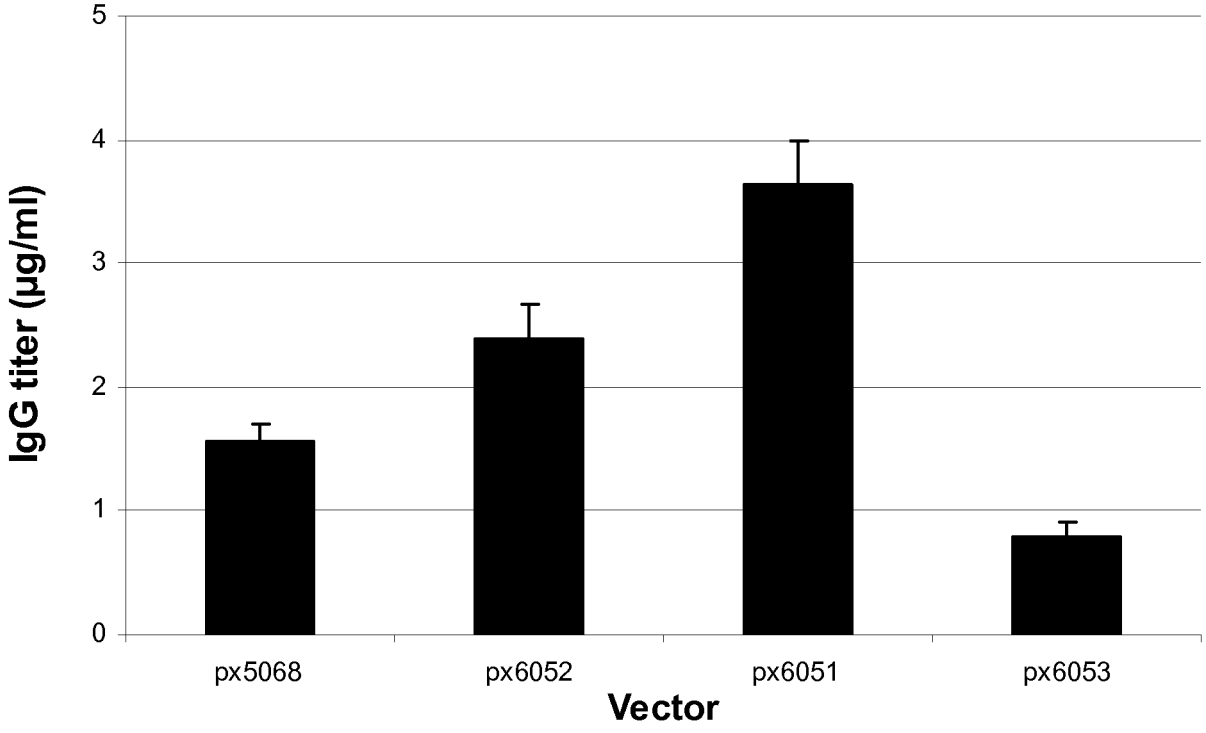


Figure 4

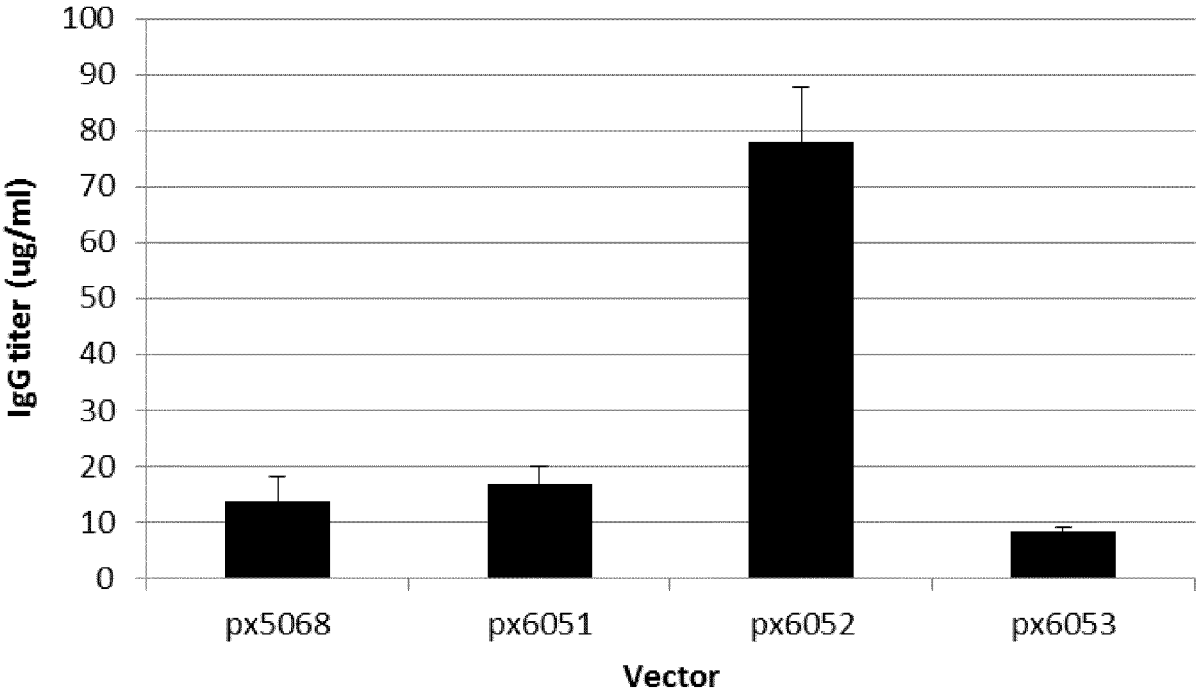

100
90
80
70
60
50
40
30
20
10
0
IgG titer (ug/ml)
px5068
px6051
px6052
px6053
Vector

Figure 5

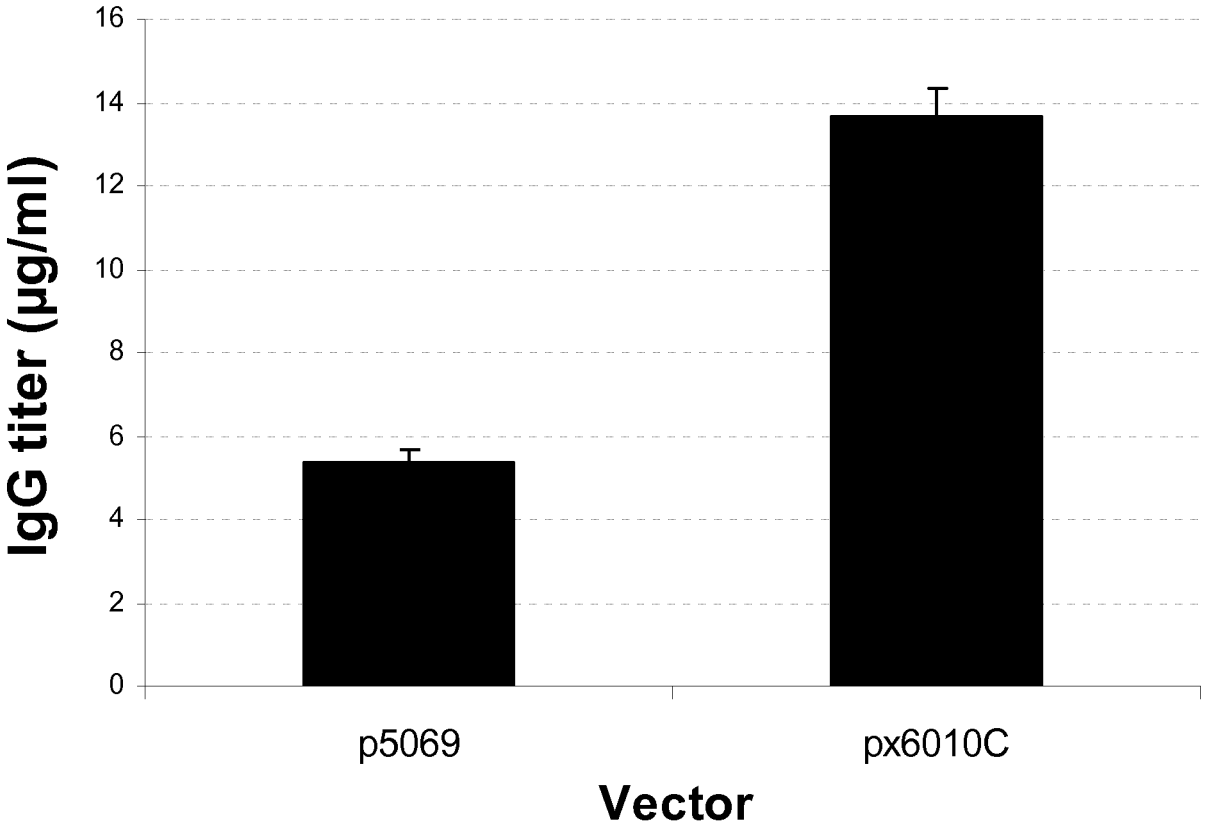


Figure 6

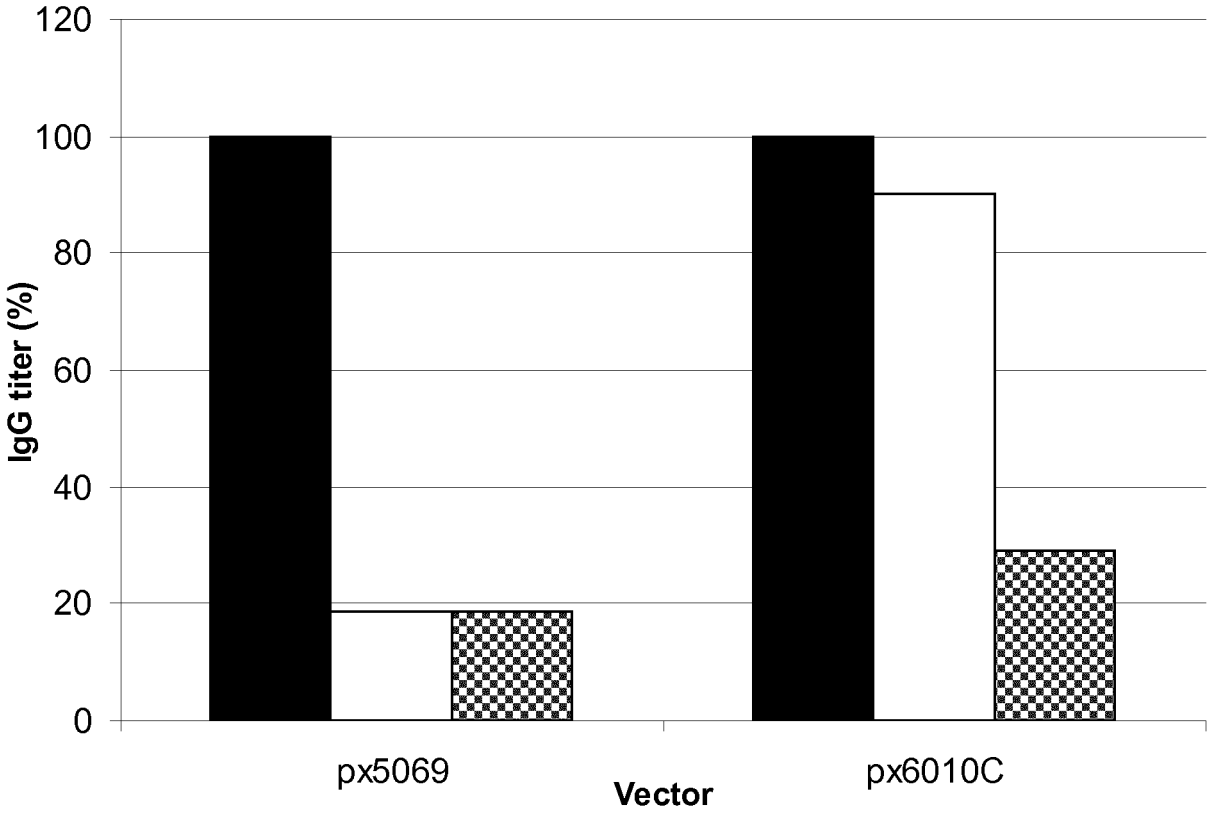


Figure 7

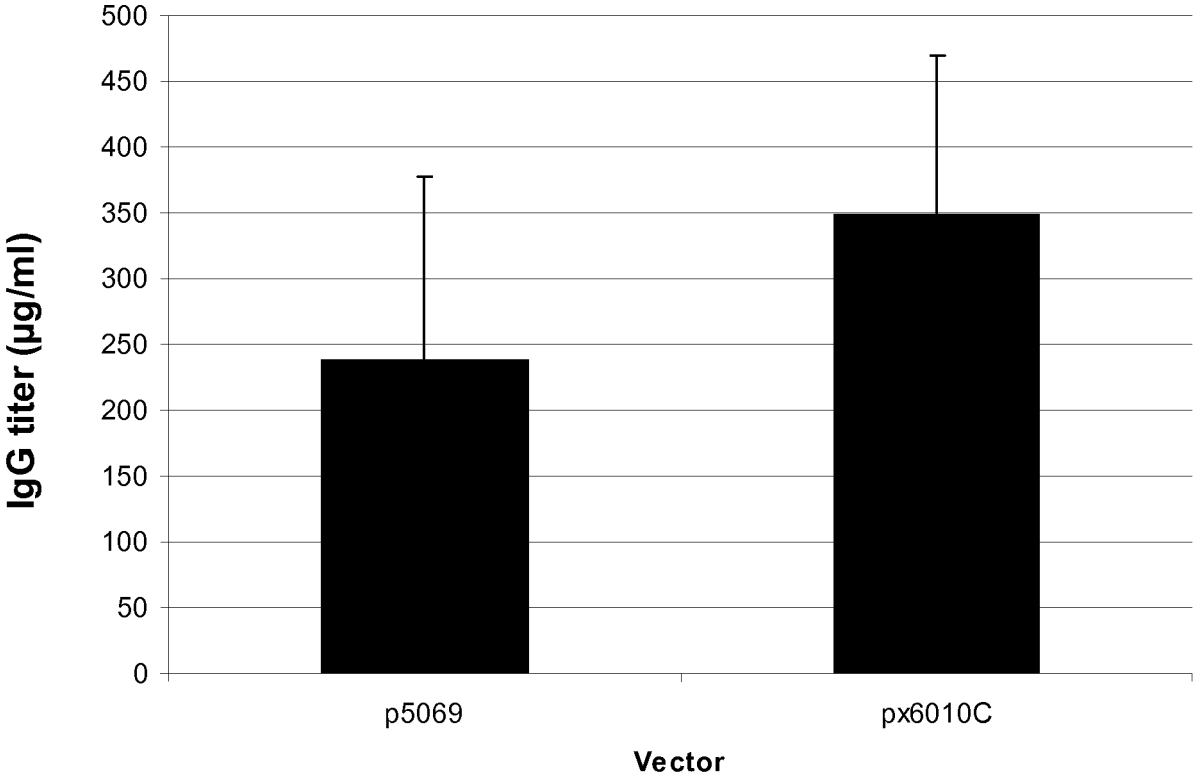

500
450
400
350
300
250
200
150
100
50
0
IgG titer (µg/ml)
p5069
px6010C
Vector

Figure 8

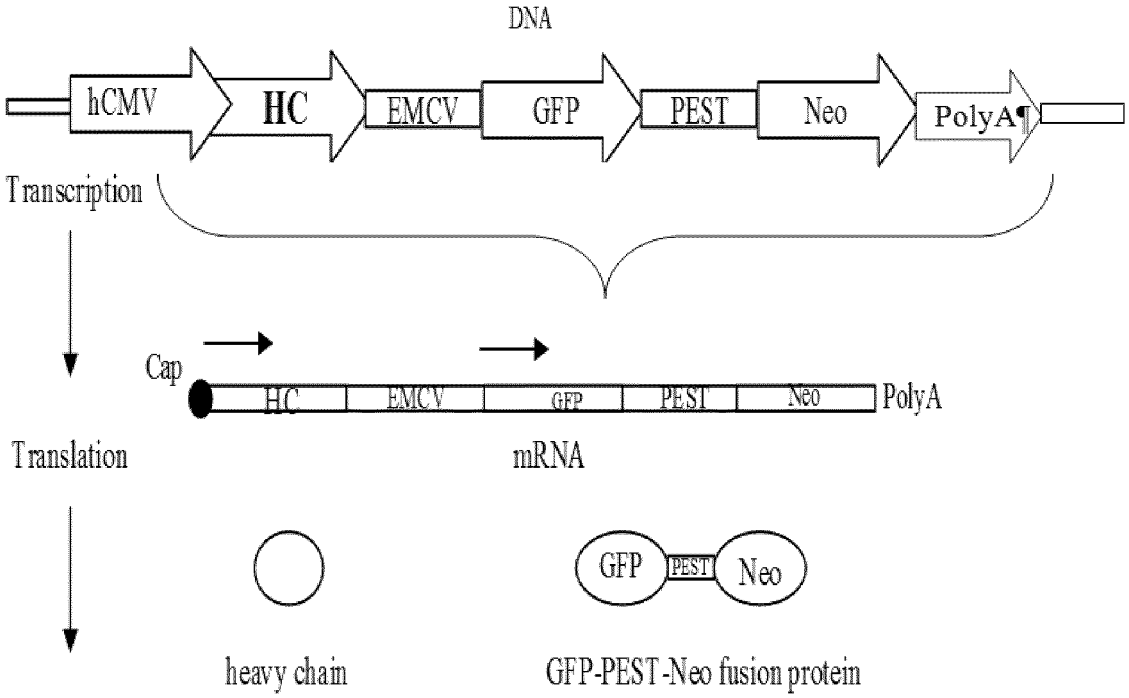

DNA
hCMV
HC
EMCV
GFP
PEST
Neo
PolyA¶
Transcription
Cap
HC
EMCV
GFP
PEST
Neo
PolyA
Translation
mRNA
GFP
PEST
Neo
heavy chain
GFP-PEST-Neo fusion protein

Figure 9

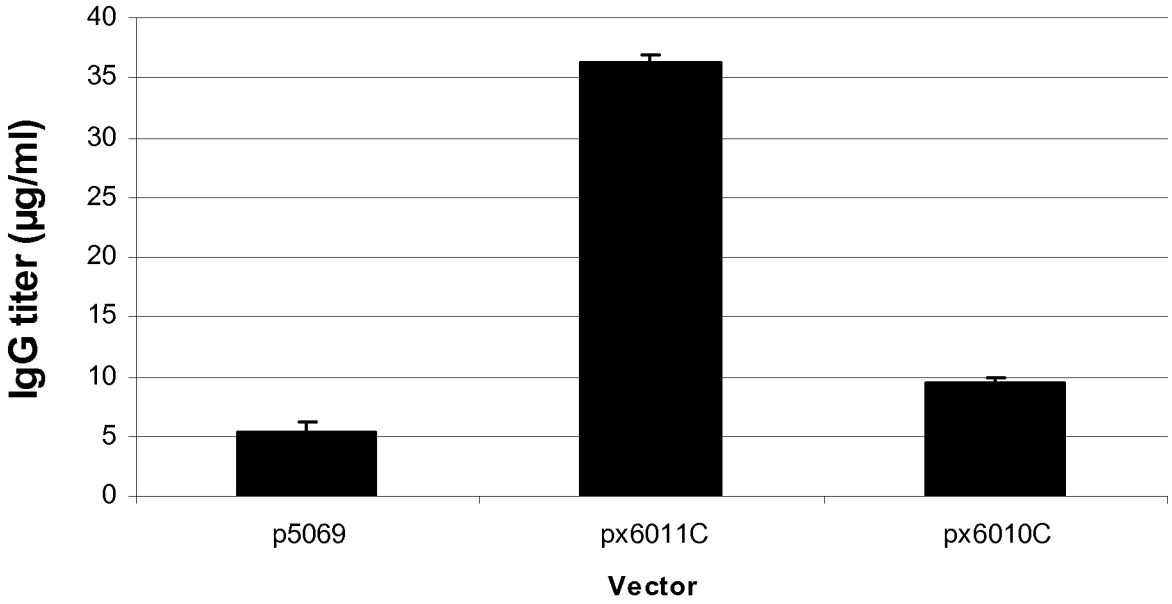
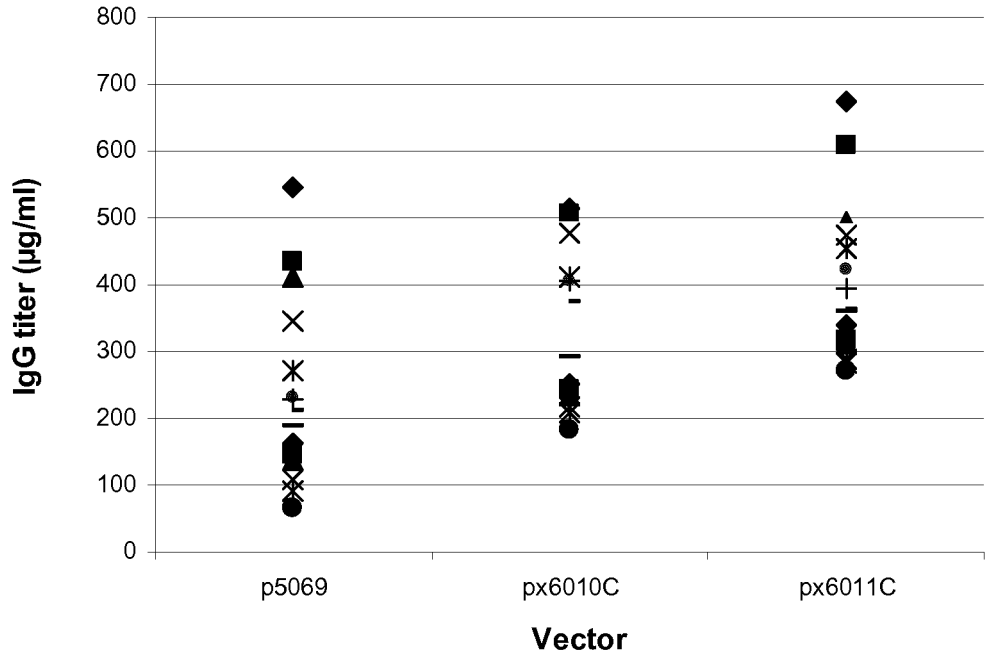

40
35
30
25
20
15
10
5
0
IgG titer (µg/ml)
p5069
px6011C
px6010C
Vector

Figure 10

A


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

B

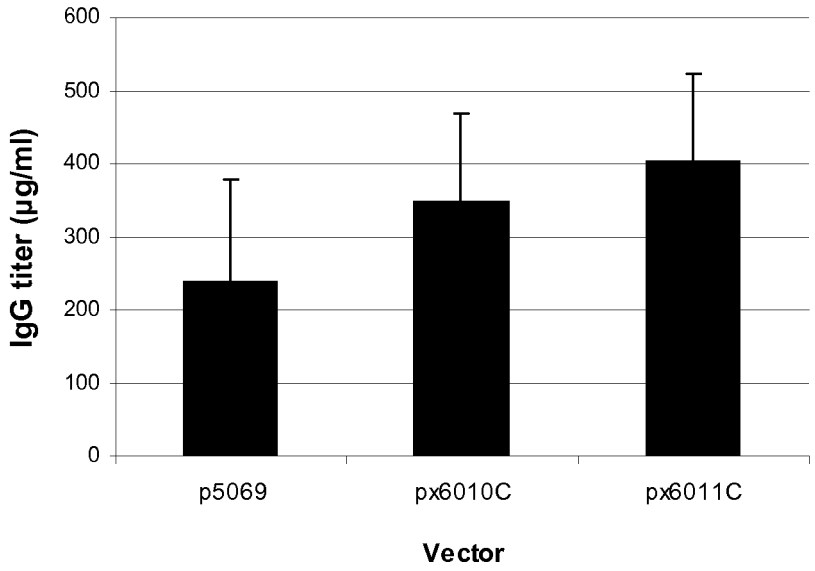
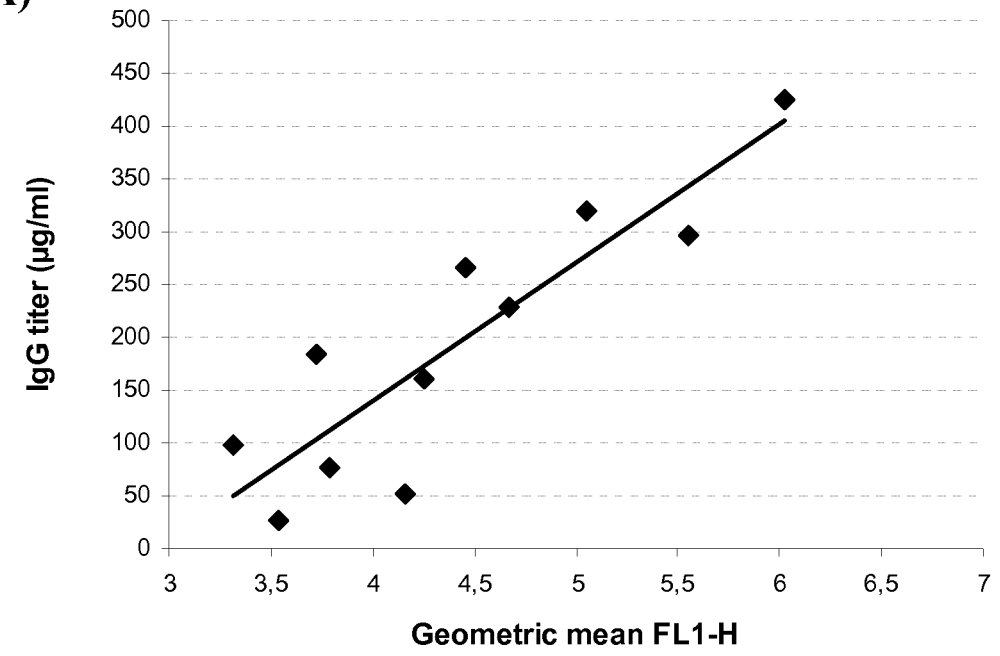

600
500
400
300
200
100
0
IgG titer (µg/ml)
p5069
px6010C
px6011C
Vector

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)

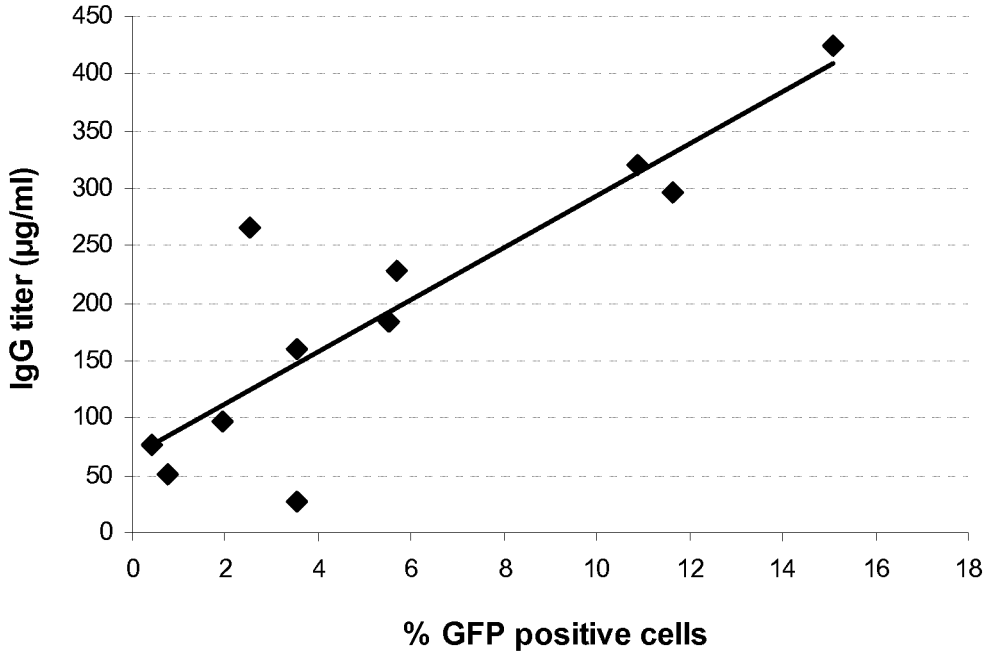

IgG titer (µg/ml)
450
400
350
300
250
200
150
100
50
0
0
2
4
6
8
10
12
14
16
18
% GFP positive cells

Figure 12

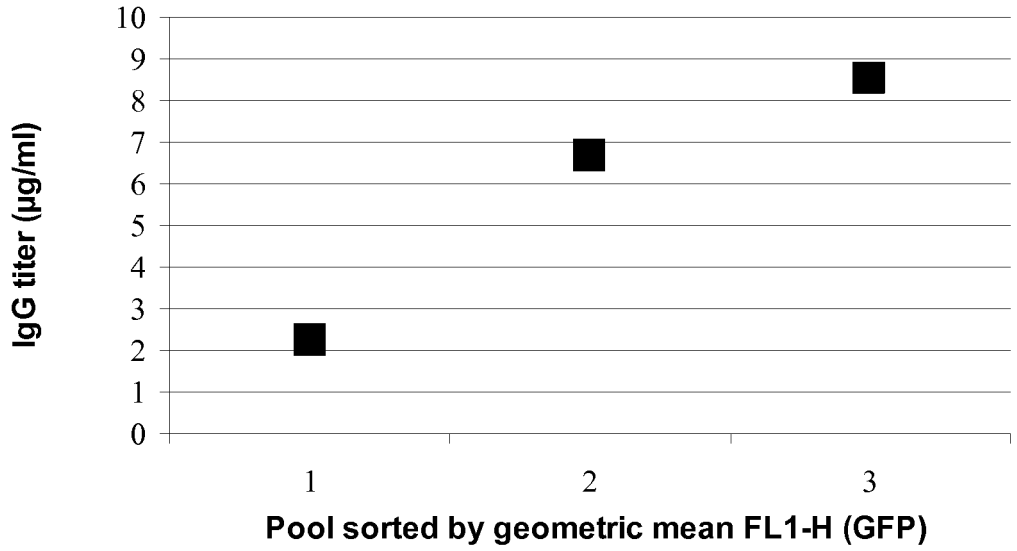

IgG titer (µg/ml)
10
9
8
7
6
5
4
3
2
1
0
1
2
3
Pool sorted by geometric mean FL1-H (GFP)

Figure 13

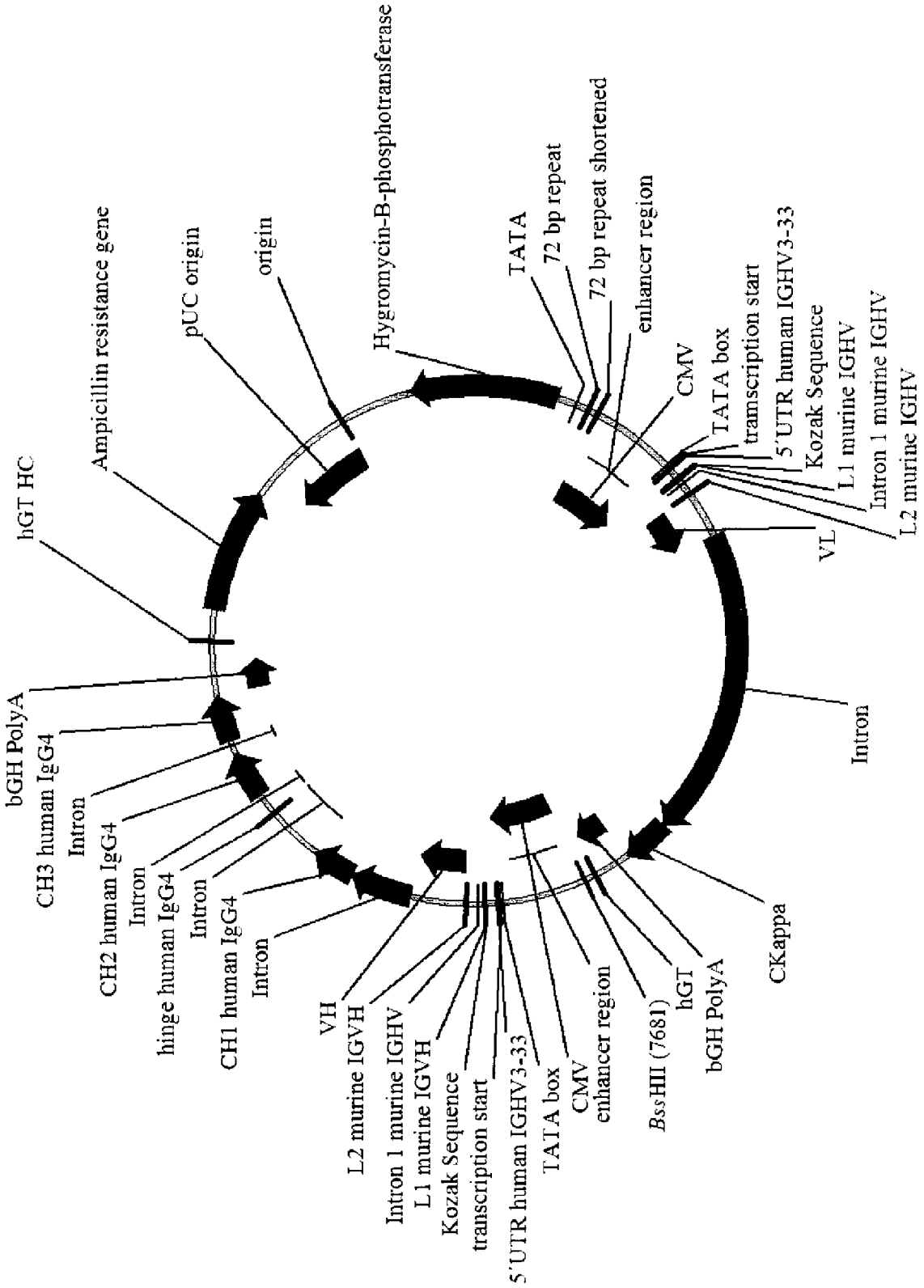

Hygromycin-B-phosphotransferase
TATA
72 bp repeat
72 bp repeat shortened
enhancer region
CMV
TATA box
transcription start
5'UTR human IGHV3-33
Kozak Sequence
L1 murine IGHV
Intron 1 murine IGHV
L2 murine IGHV
VL
Intron
CKappa
bGH PolyA
hGT
BssHII (7681)
CMV
enhancer region
TATA box
5'UTR human IGHV3-33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

Figure 14

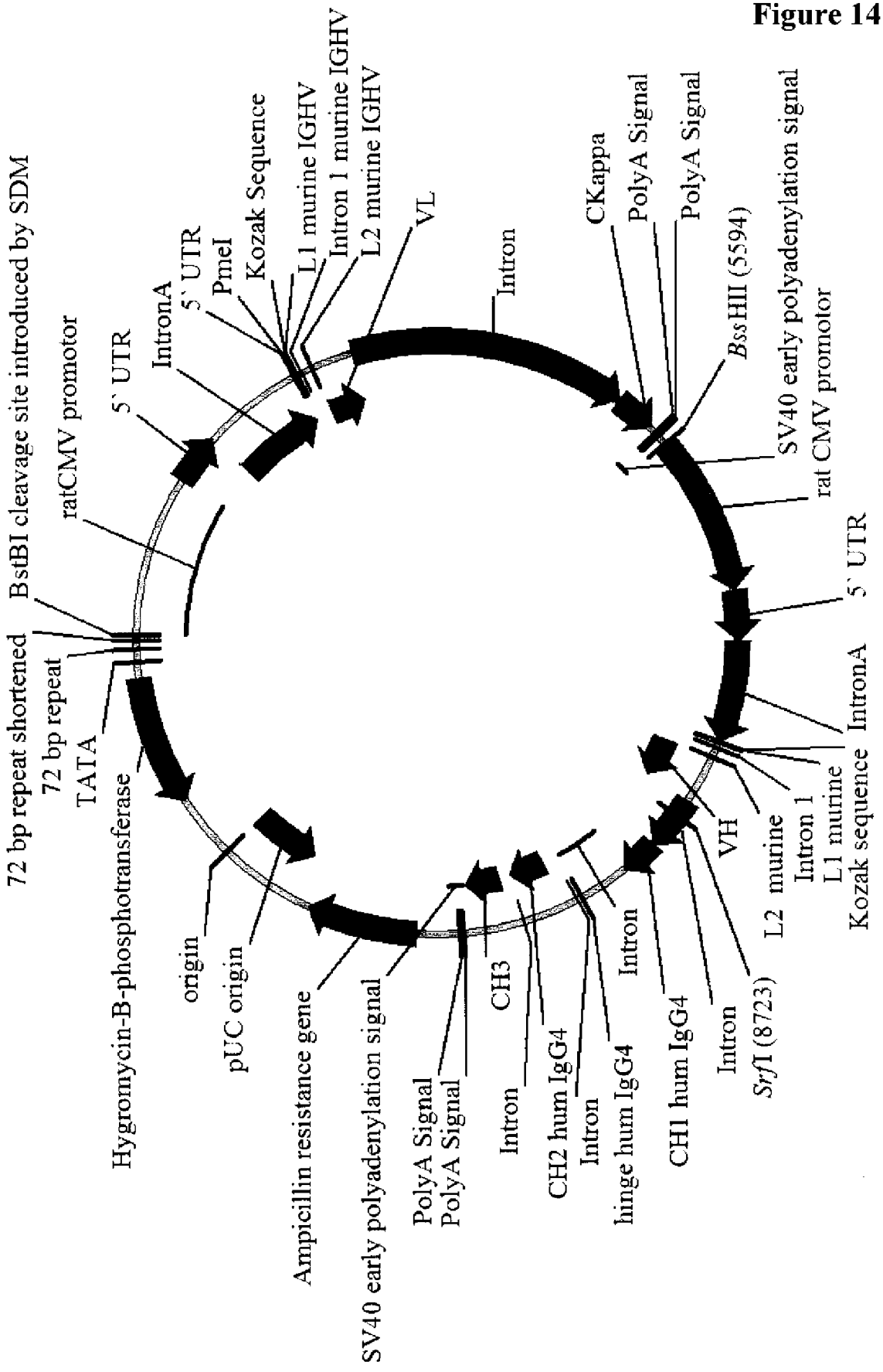
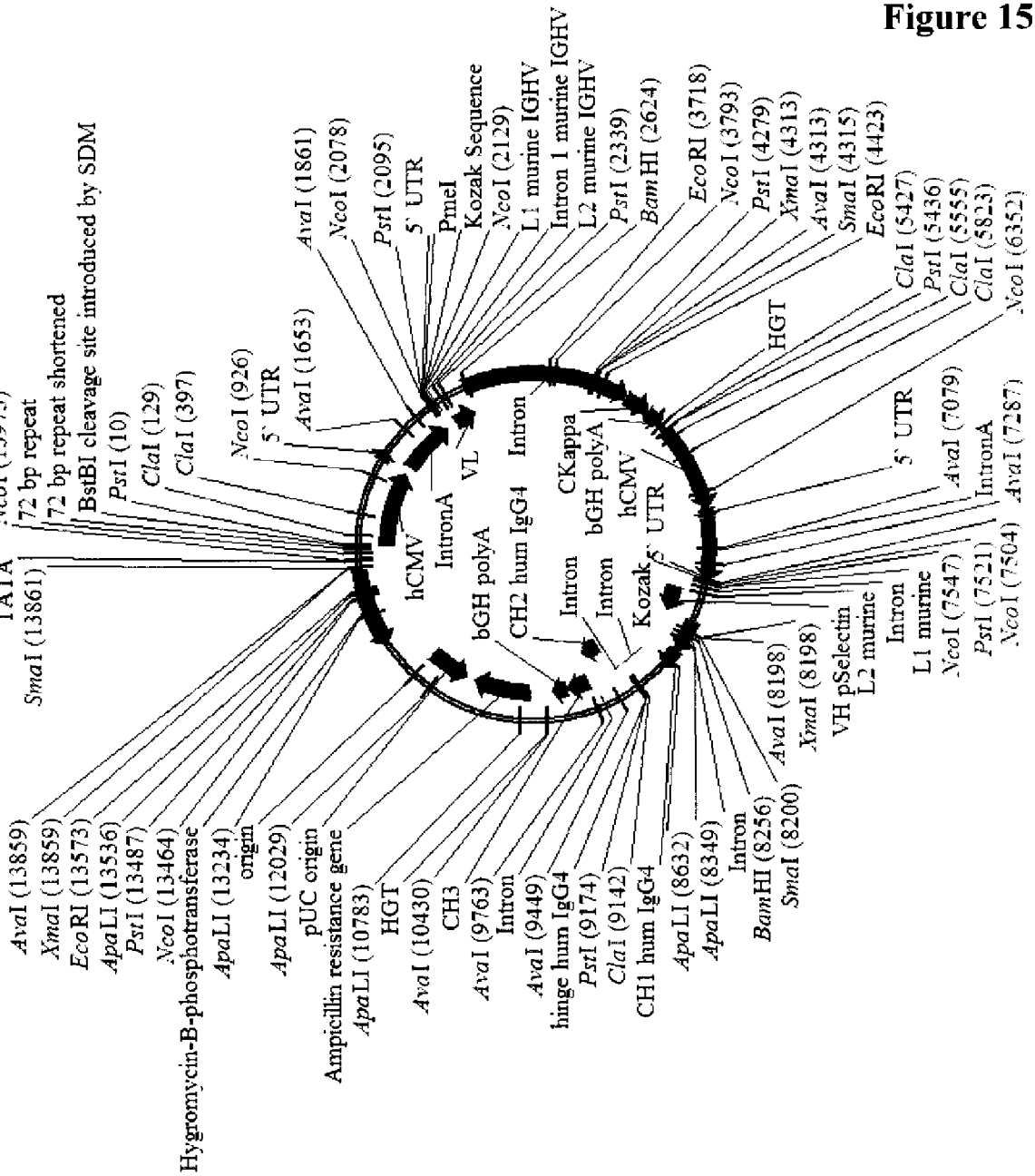

72 bp repeat shortened
BstBI cleavage site introduced by SDM
72 bp repeat
ratCMV promotor
TATA
5` UTR
Hygromycin-B-phosphotransferase
IntronA
origin
5` UTR
pUC origin
PmeI
Ampicillin resistance gene
Kozak Sequence
SV40 early polyadenylation signal
L1 murine IGHV
PolyA Signal
Intron 1 murine IGHV
PolyA Signal
L2 murine IGHV
CH3
VL
Intron
CH2 hum IgG4
CKappa
Intron
PolyA Signal
hinge hum IgG4
BssHII (5594)
Intron
SV40 early polyadenylation signal
CH1 hum IgG4
rat CMV promotor
Intron
5` UTR
SrfI (8723)
IntronA
VH
L2 murine
Intron 1
L1 murine
Kozak sequence

Figure 15


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