FIG. 1A

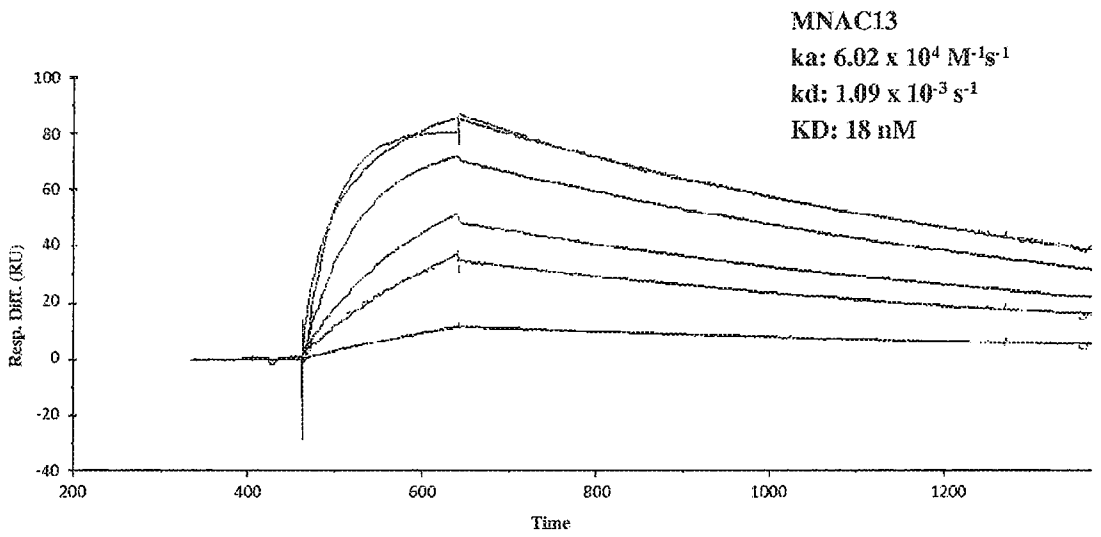

MNAC13
ka: 6.02 x 10^4 M^-1s^-1
kd: 1.09 x 10^-3 s^-1
KD: 18 nM
Resp. Diff. (RU)
100
80
60
40
20
0
-20
-40
200
400
600
800
1000
1200
Time

FIG. 1B

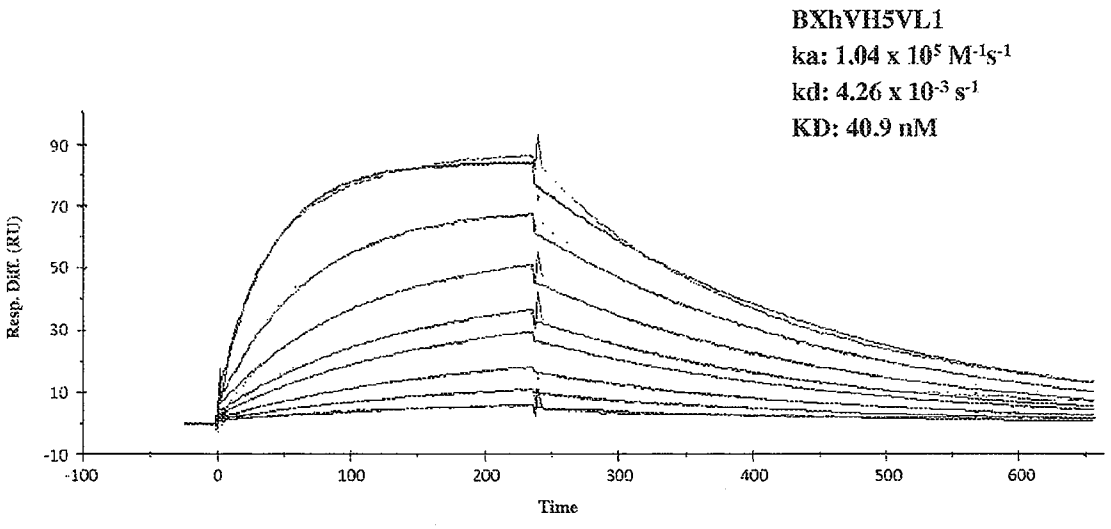

BXhVH5VL1
ka: 1.04 x 10^5 M^-1s^-1
kd: 4.26 x 10^-3 s^-1
KD: 40.9 nM
Resp. Diff. (RU)
90
70
50
30
10
-10
-100
0
100
200
300
400
500
600
Time

FIG. 1C

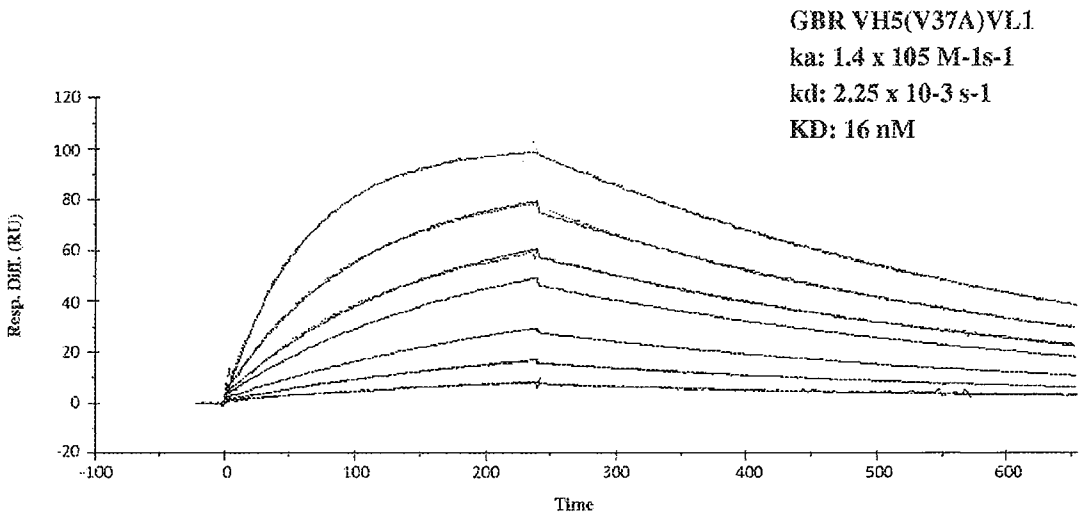

GBR VH5(V37A)VL1
ka: 1.4 x 105 M-1s-1
kd: 2.25 x 10-3 s-1
KD: 16 nM
Resp. Diff. (RU)
Time

FIG. 1D

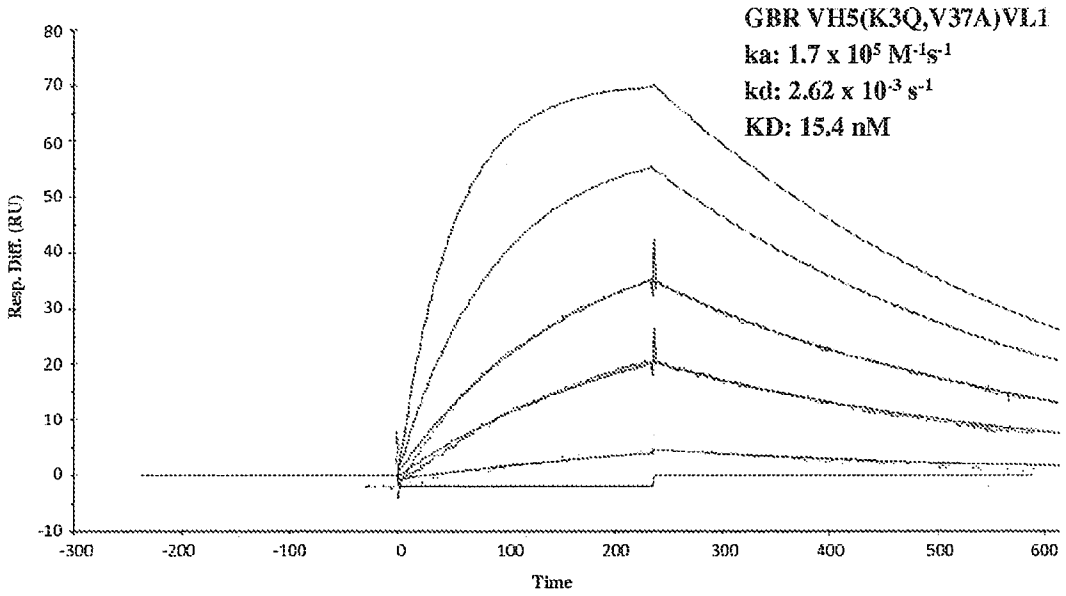

GBR VH5(K3Q,V37A)VL1
ka: 1.7 x 10^5 M^-1s^-1
kd: 2.62 x 10^-3 s^-1
KD: 15.4 nM
Resp. Diff. (RU)
Time

FIG. 2A

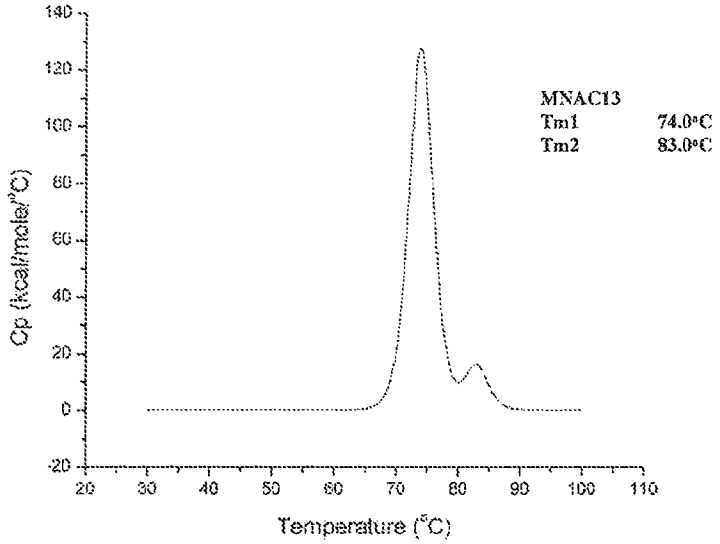

MNAC13
Tm1 74.0°C
Tm2 83.0°C
Cp (kcal/mole/°C)
Temperature (°C)

FIG. 2B

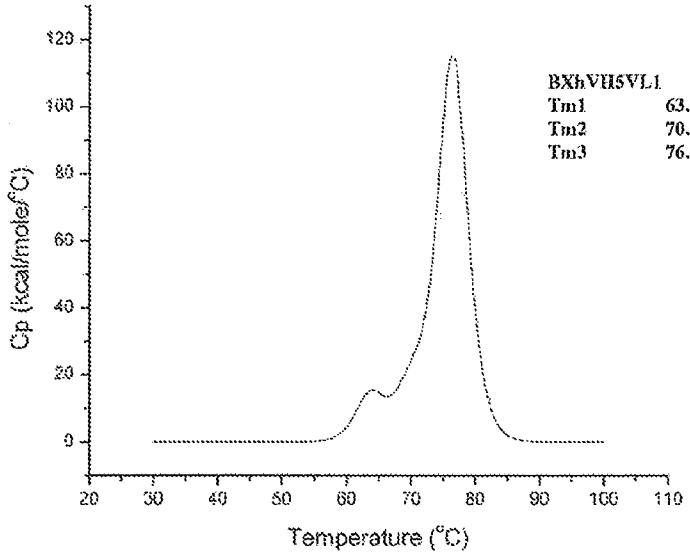

BXhVH5VL1
Tm1 63.6°C
Tm2 70.3°C
Tm3 76.5°C
Cp (kcal/mole/°C)
Temperature (°C)

FIG. 2C

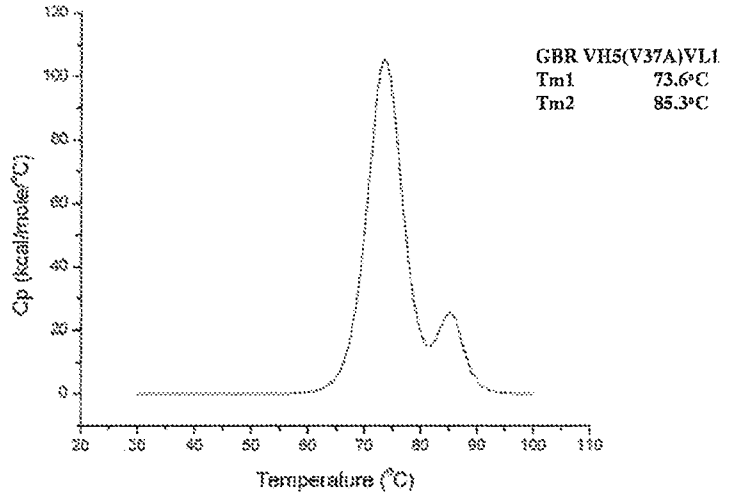

GBR VH5(V37A)VL1
Tm1 73.6°C
Tm2 85.3°C
Cp (kcal/mole/°C)
Temperature (°C)

FIG. 2D

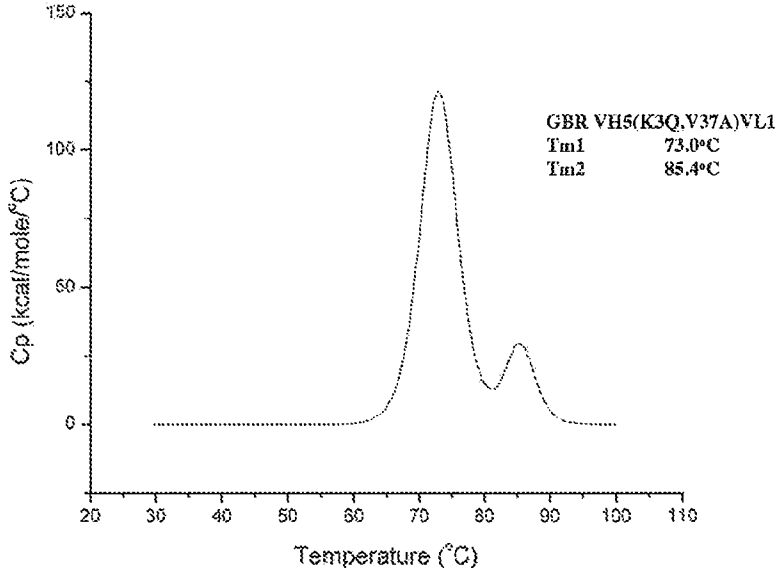

GBR VH5(K3Q,V37A)VL1
Tm1 73.0°C
Tm2 85.4°C
Cp (kcal/mole/°C)
Temperature (°C)

FIG. 2E

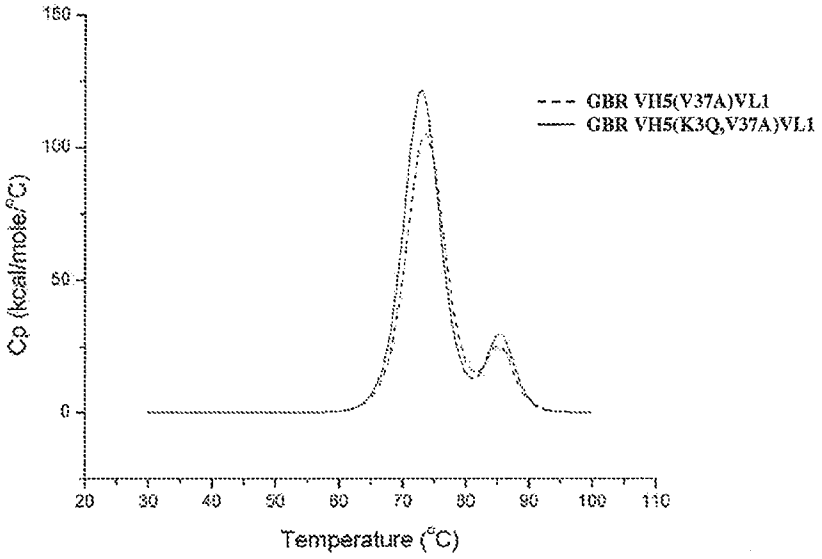

GBR VH5(V37A)VL1
GBR VH5(K3Q,V37A)VL1
Cp (kcal/mole/°C)
Temperature (°C)

FIG. 2F

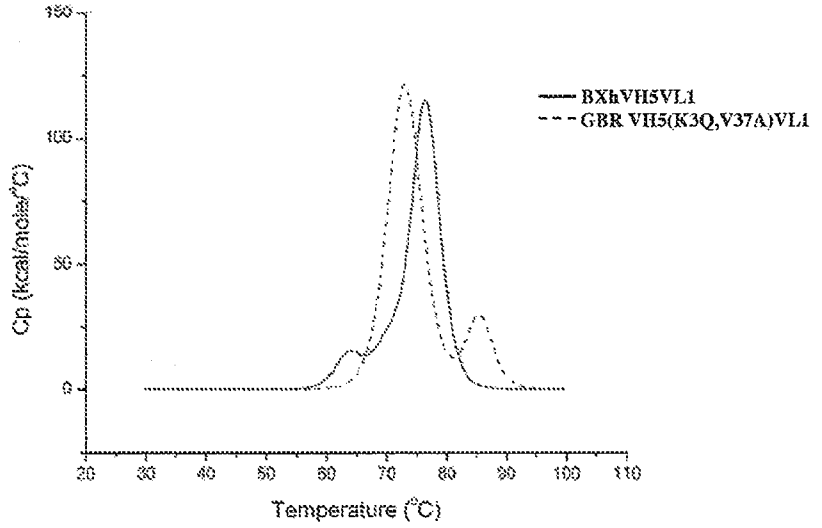

BXhVH5VL1
GBR VH5(K3Q,V37A)VL1
Cp (kcal/mole/°C)
Temperature (°C)

FIG. 2G

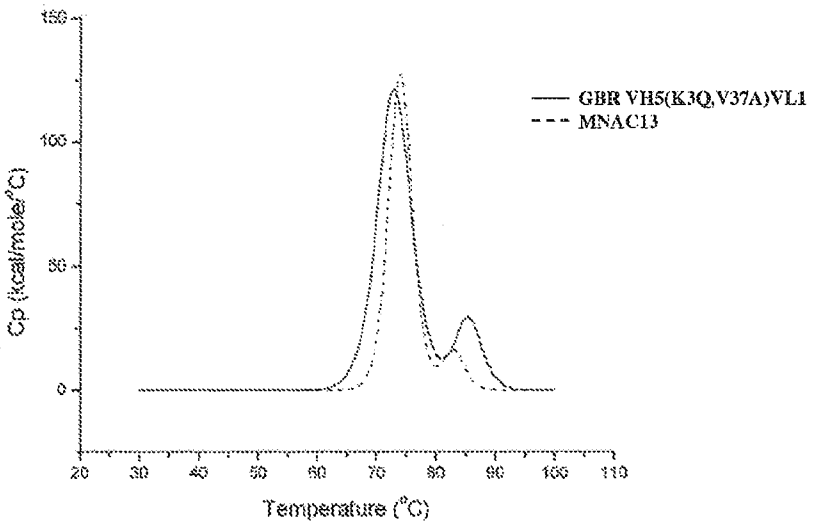
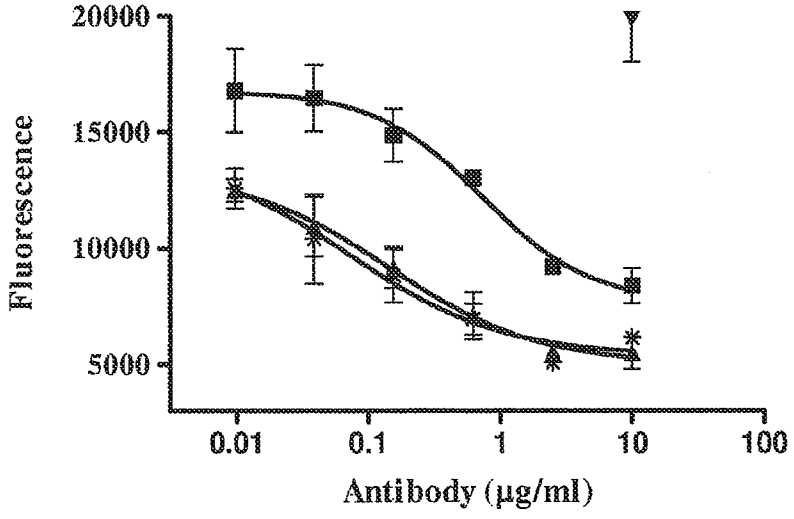
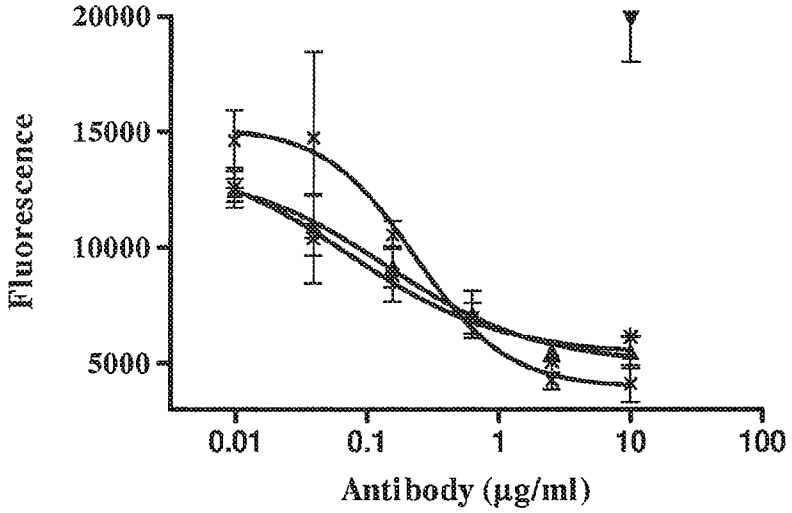


FIG. 3A



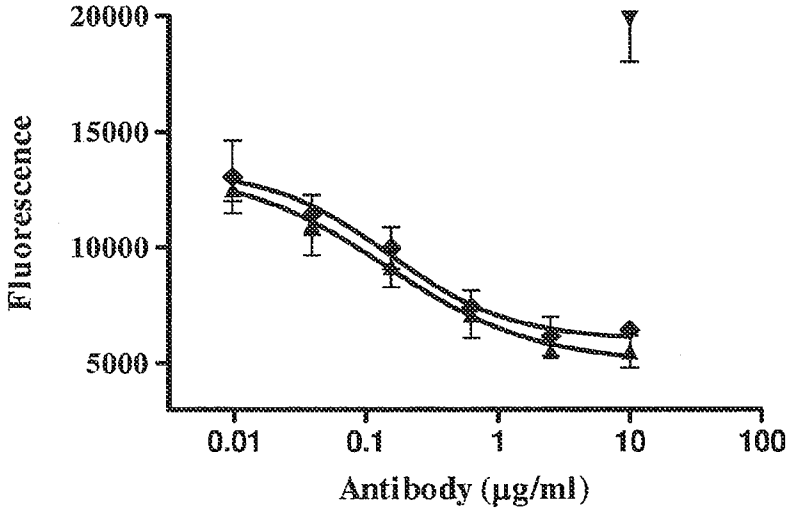
* GBR VH5(V37A)VL1
▲ GBR VH5(K3Q,V37A)VL1
■ BXhVH5VL1
▼ Negative control

FIG. 3B



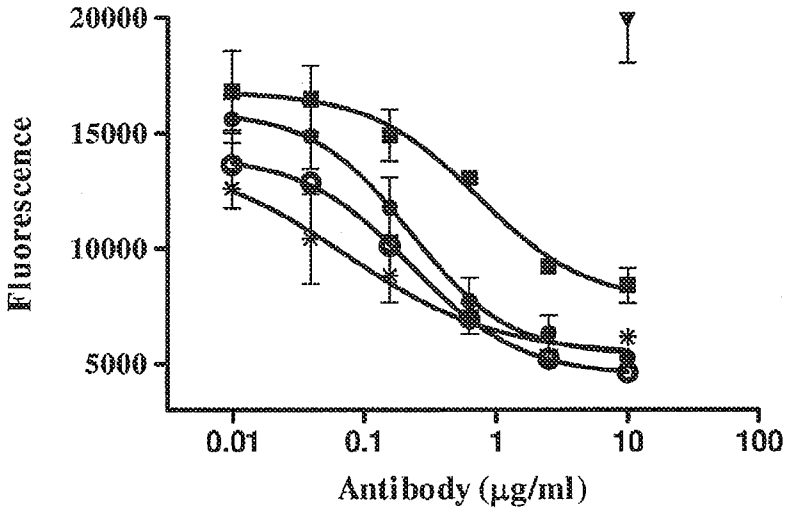
✱ GBR VH5(V37A)VL1
▲ GBR VH5(K3Q,V37A)VL1
X MNAC13
▼ Negative control

FIG. 3C



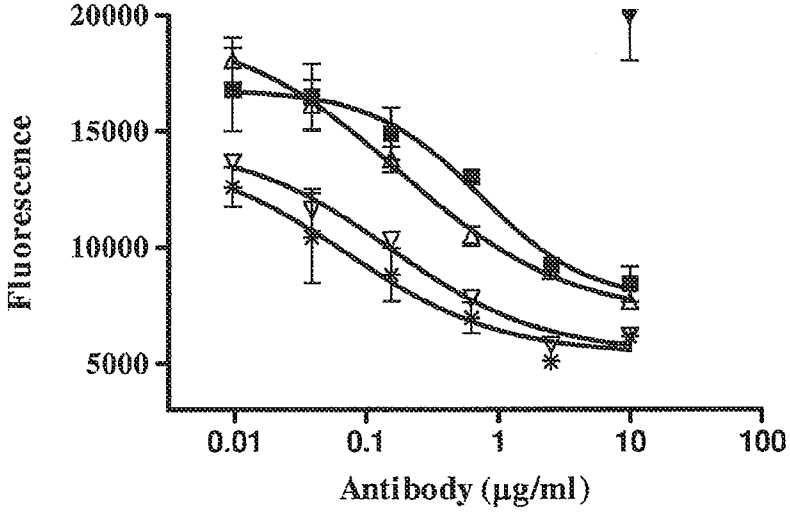
▲ GBR VH5(K3Q,V37A)VL1
◆ GBR VH5(K3Q,V37A)VL1 IGHG4 S228P
▼ Negative control

FIG. 3D



* GBR VH5(V37A)VL1
BXhVH5VL1
Negative control
BXhVH5VL3
GBR VH5(V37A)VL3

FIG. 3E



* GBR VH5(V37A)VL1
BXhVH5VL1
Negative control
BXhVH3VL1
GBR VH3(V37A)VL1

FIG. 4

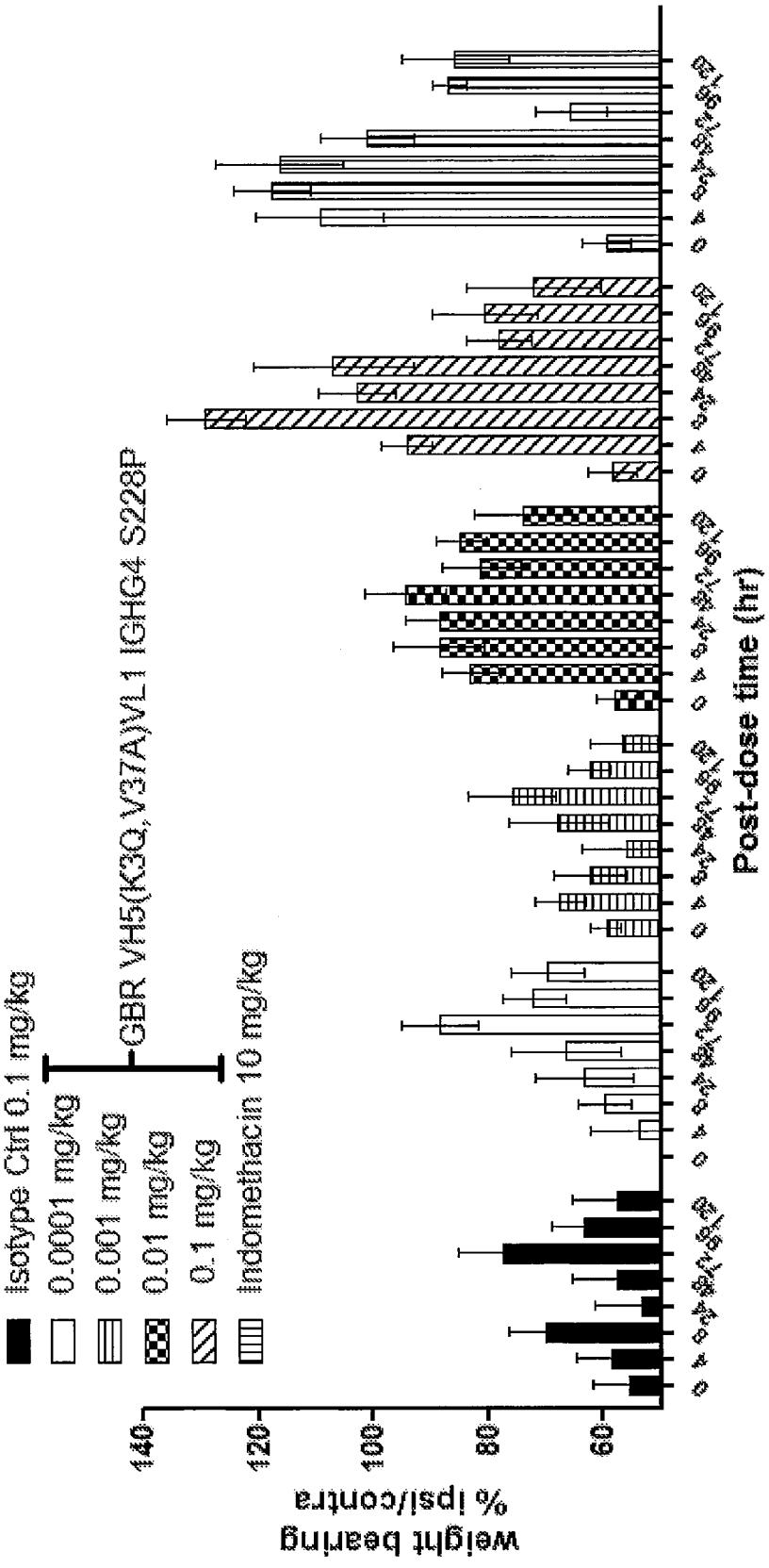

weight bearing
% ipsi/contra
140
120
100
80
60
Post-dose time (hr)
Isotype Ctrl 0.1 mg/kg
0.0001 mg/kg
0.001 mg/kg
0.01 mg/kg
0.1 mg/kg
Indomethacin 10 mg/kg
GBR VH5(K3Q,V37A)VL1 IGHG4 S228P

FIG. 5

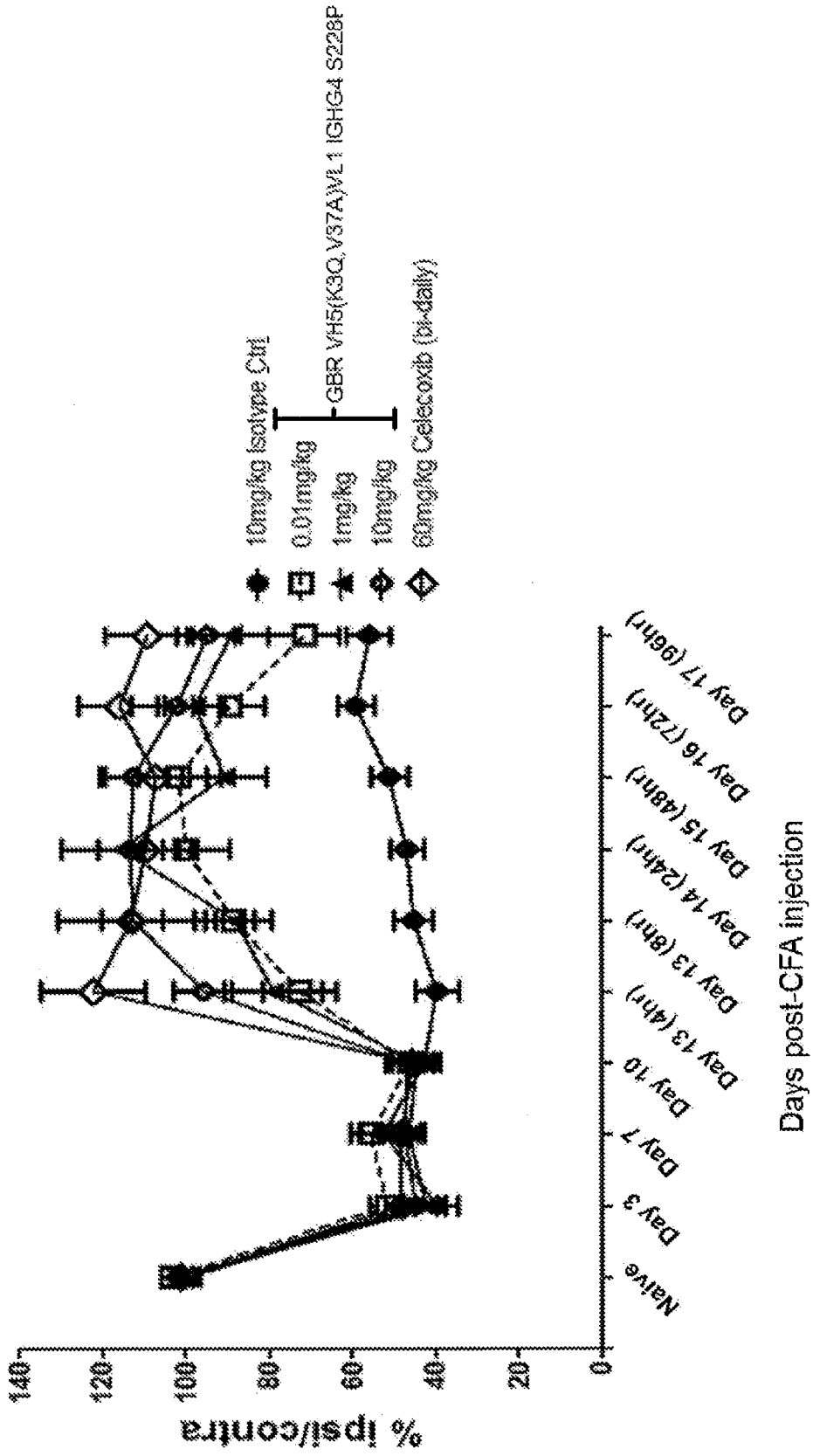

10mg/kg Isotype Ctrl
0.01mg/kg
1mg/kg
10mg/kg
GBR VH5(K3Q,V37A)VL1 IGHG4 S228P
60mg/kg Celecoxib (bi-daily)
% ipsi/contra
140
120
100
80
60
40
20
0
Naïve
Day 3
Day 7
Day 10
Day 13 (4hr)
Day 13 (8hr)
Day 14 (24hr)
Day 15 (48hr)
Day 16 (72hr)
Day 17 (96hr)
Days post-CFA injection

FIG. 6A

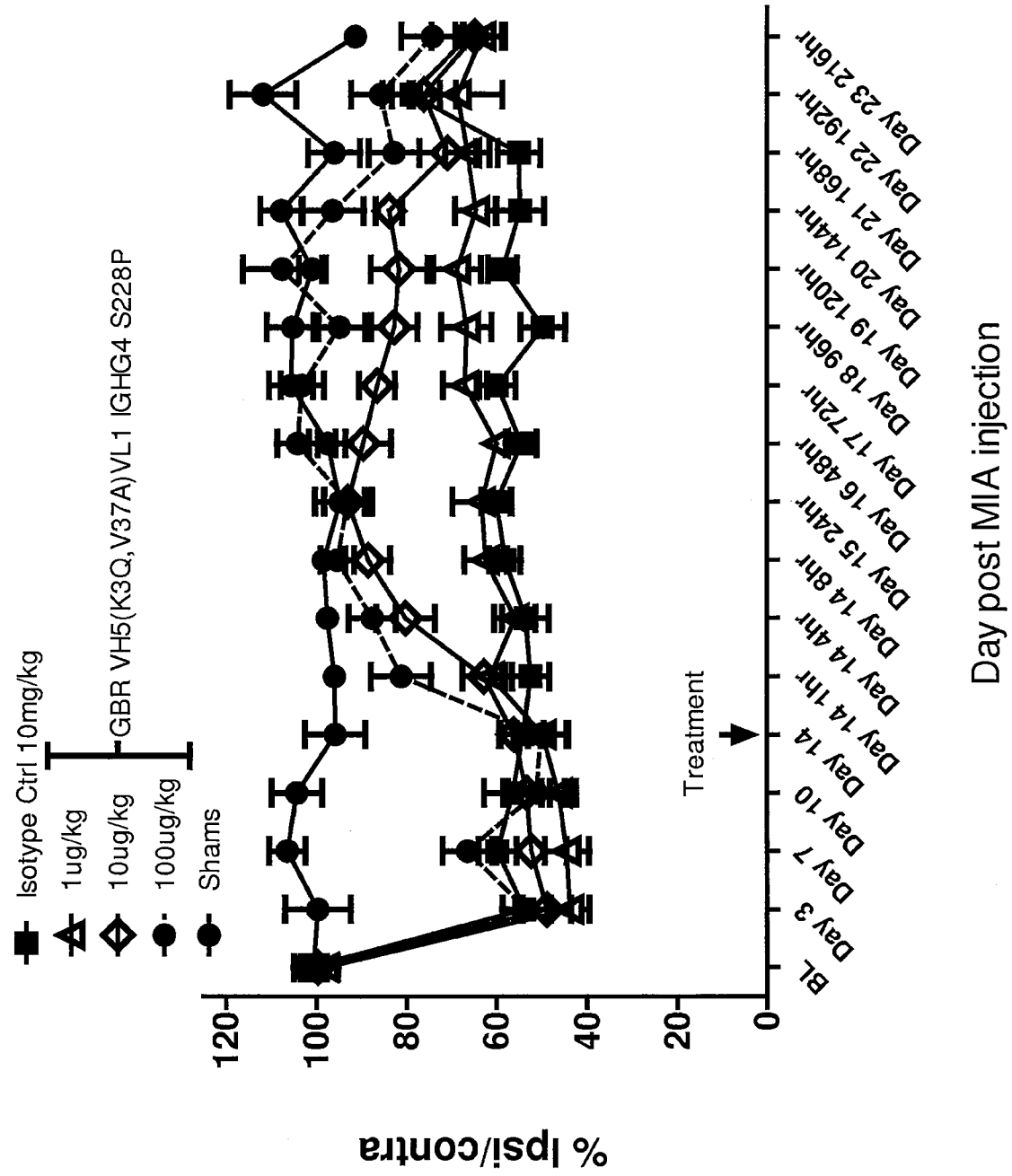

Isotype Ctrl 10mg/kg
1ug/kg
10ug/kg
100ug/kg
Shams
GBR VH5(K3Q,V37A)VL1 IGHG4 S228P
% Ipsi/contra
120
100
80
60
40
20
0
Treatment
BL
Day 3
Day 7
Day 10
Day 14
Day 14 1hr
Day 14 4hr
Day 14 8hr
Day 15 24hr
Day 16 48hr
Day 17 72hr
Day 18 96hr
Day 19 120hr
Day 20 144hr
Day 21 168hr
Day 22 192hr
Day 23 216hr
Day post MIA injection

FIG. 6B

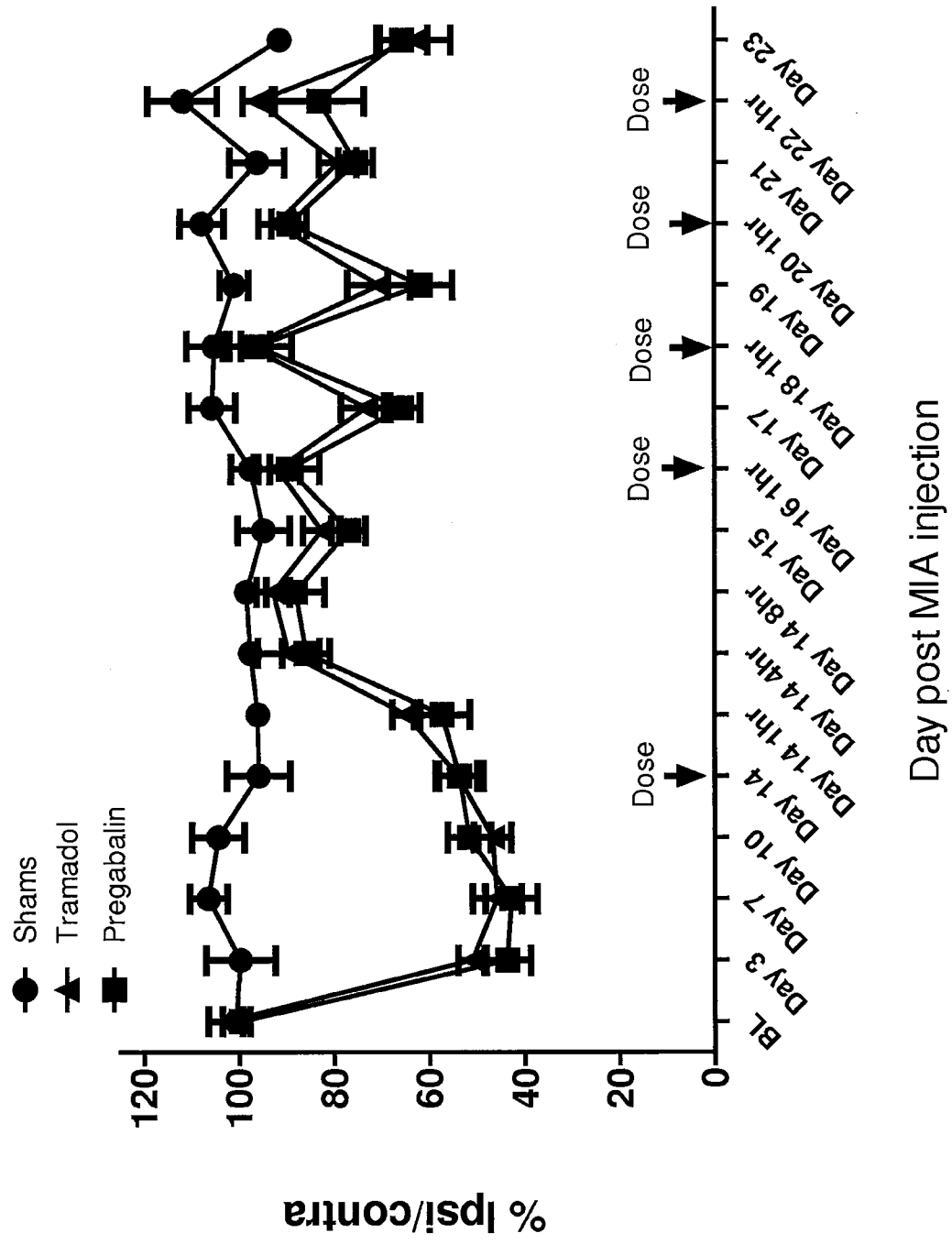

Shams
Tramadol
Pregabalin
% Ipsi/contra
120
100
80
60
40
20
0
Dose
Dose
Dose
Dose
BL
Day 3
Day 7
Day 10
Day 14
Day 14 1hr
Day 14 4hr
Day 14 8hr
Day 15
Day 16 1hr
Day 17
Day 18 1hr
Day 19
Day 20 1hr
Day 21
Day 22 1hr
Day 23
Day post MIA injection

FIG. 7A

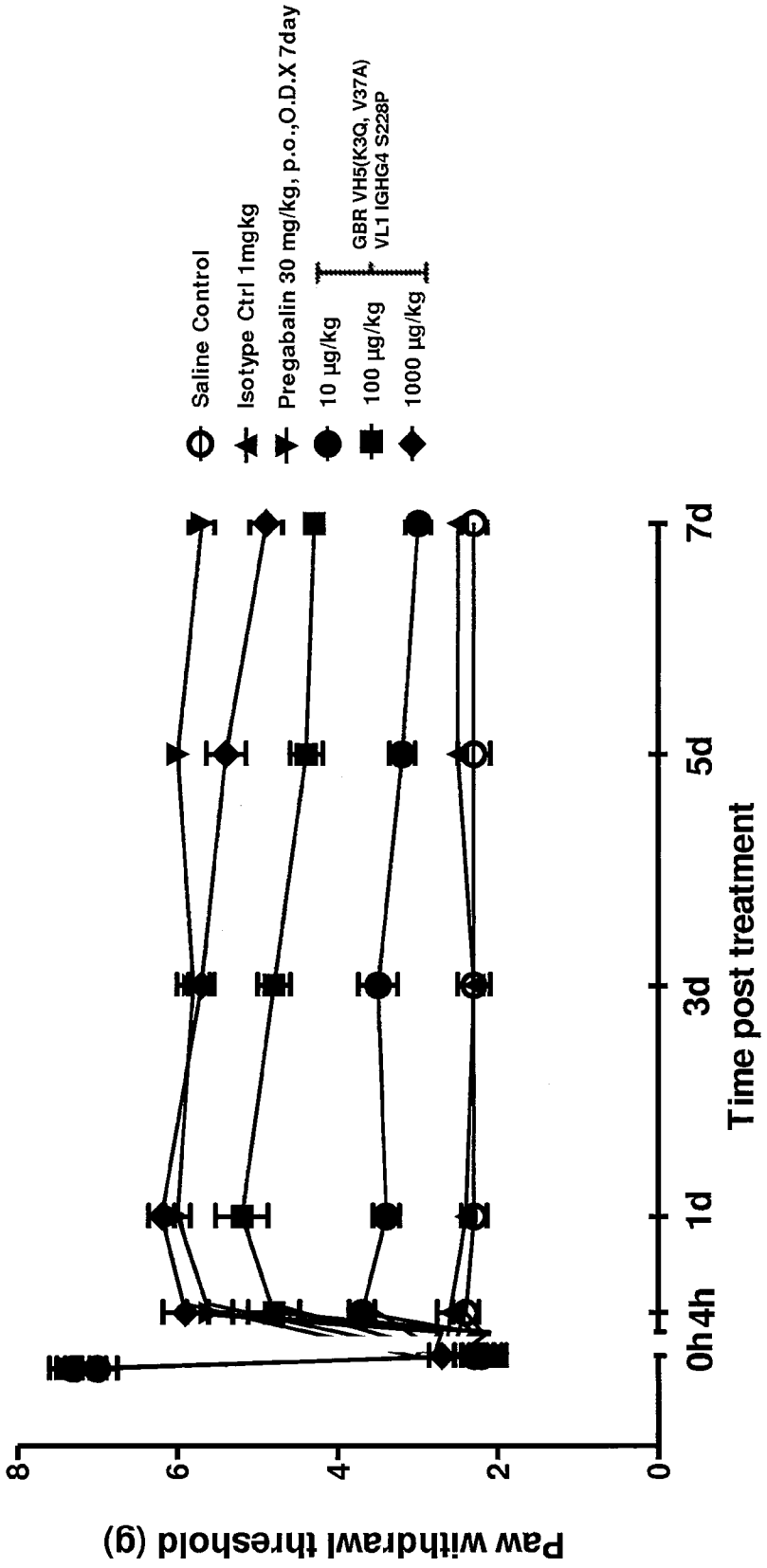
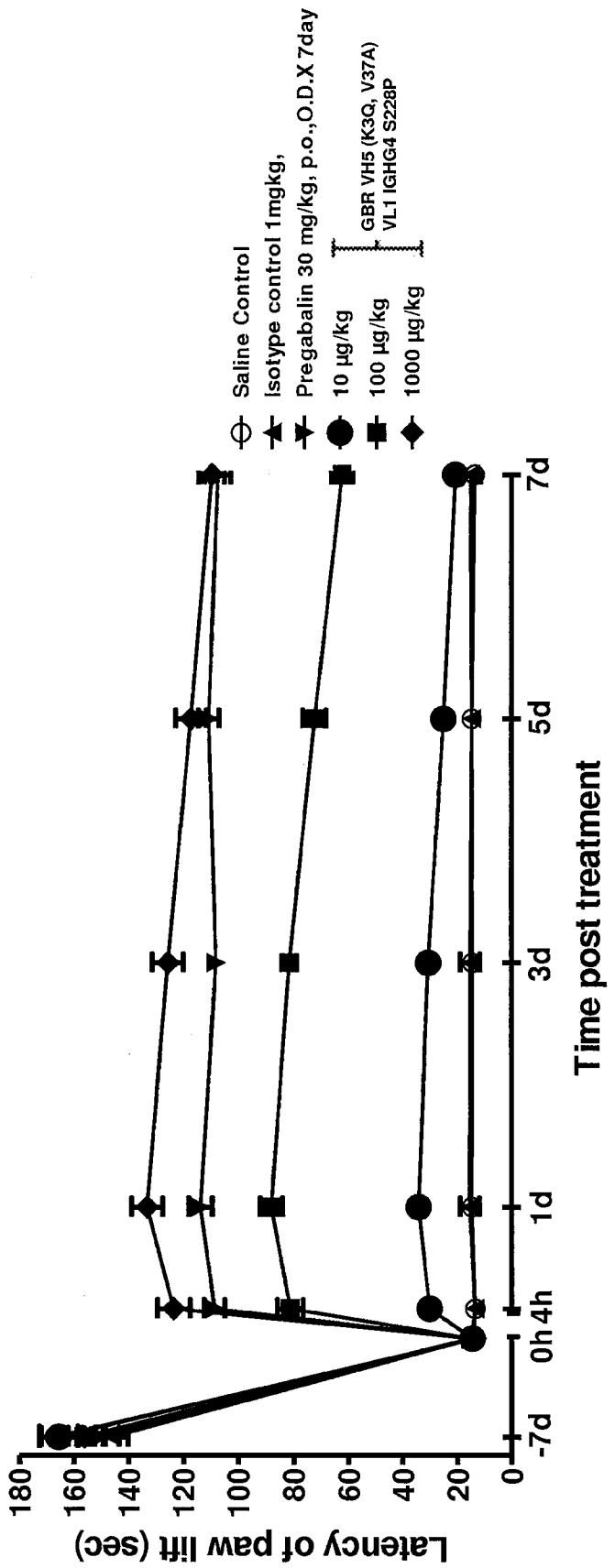

Saline Control
Isotype Ctrl 1mgkg
Pregabalin 30 mg/Kg, p.o.,O.D.X 7day
10 µg/kg
100 µg/kg
1000 µg/kg
GBR VH5(K3Q, V37A)
VL1 IGHG4 S228P
Paw withdrawl threshold (g)
0
2
4
6
8
0h
4h
1d
3d
5d
7d
Time post treatment

FIG. 7B


Saline Control
Isotype control 1mgkg,
Pregabalin 30 mg/kg, p.o.,O.D.X 7day
10 µg/kg
100 µg/kg
1000 µg/kg
GBR VH5 (K3Q, V37A)
VL1 IGHG4 S228P
Latency of paw lift (sec)
180
160
140
120
100
80
60
40
20
0
-7d
0h
4h
1d
3d
5d
7d
Time post treatment