```
pep
Ordinal    250       260       270       280       290       300
pep        DITGAALLEAKEAAINELKQYGISDYYVELINKAKTVEGVNALKAEIILSALP
```

FIG. 1

FIG. 2A

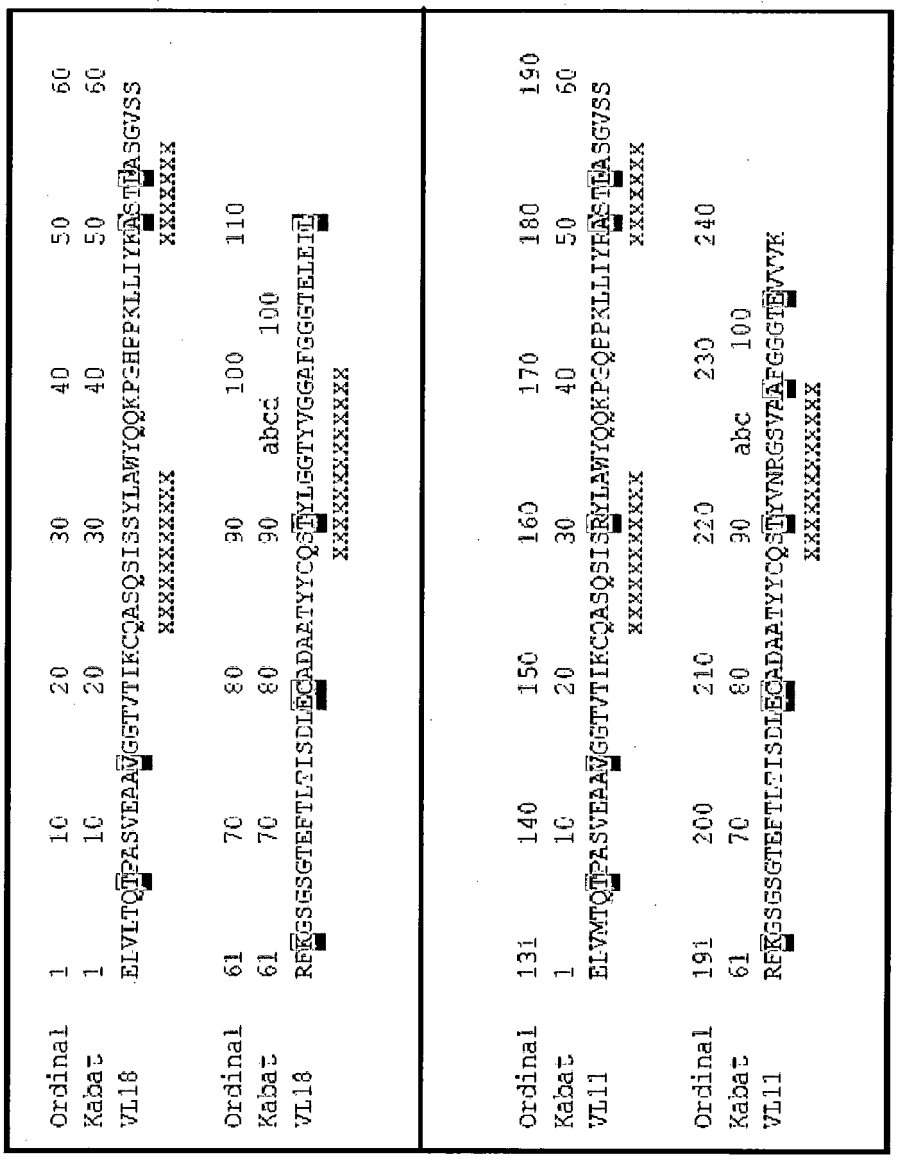

Ordinal 1 10 20 30 40 50 60
Kabat 1 10 20 30 40 50 60
VL18 ELVLTQTPASVEAAVGGTVTIKCQASQSISSYLAWYQQKPGHPPKLLIYKASTLASGVSS
xxxxxxxxxxxx xxxxxxx
Ordinal 61 70 80 90 100 110
Kabat 61 70 80 90 abcd 100
VL18 RFKGSGSGTEFTLTISDLECADAATYYCQSTYLSGTYVGGAFGGGTELELTL
xxxxxxxxxxxxx
Ordinal 131 140 150 160 170 180 190
Kabat 1 10 20 30 40 50 60
VL11 ELVMTQTPASVEAAVGGTVTIKCQASQSISSRYLAWYQQKPGQPPKLLIYKASTLASGVSS
xxxxxxxxxxxx xxxxxxx
Ordinal 191 200 210 220 230 240
Kabat 61 70 80 90 abc 100
VL11 RFKGSGSGTEFTLTISDLECADAATYYCQSTYVNPGSVAFGGGTEVVVK
xxxxxxxxxxxx

FIG. 2B

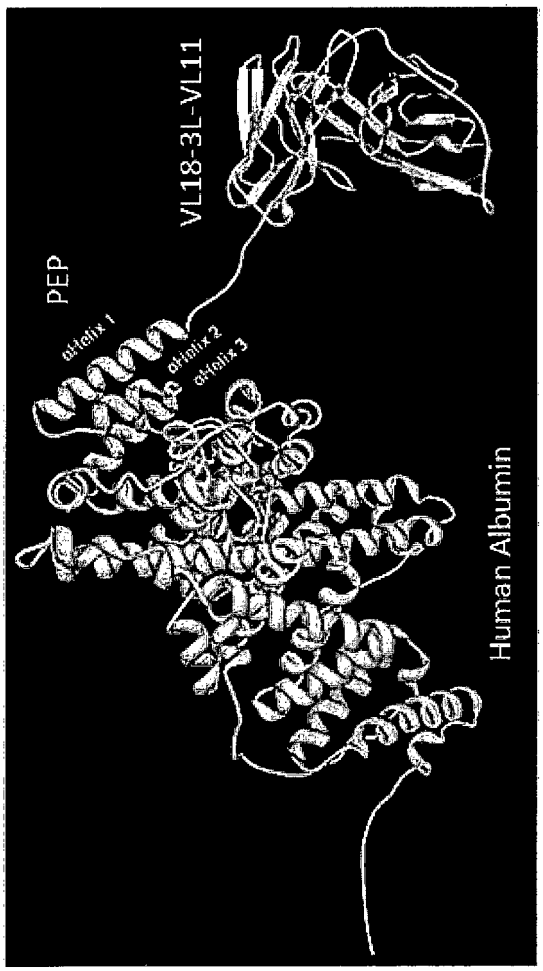


FIG. 3A

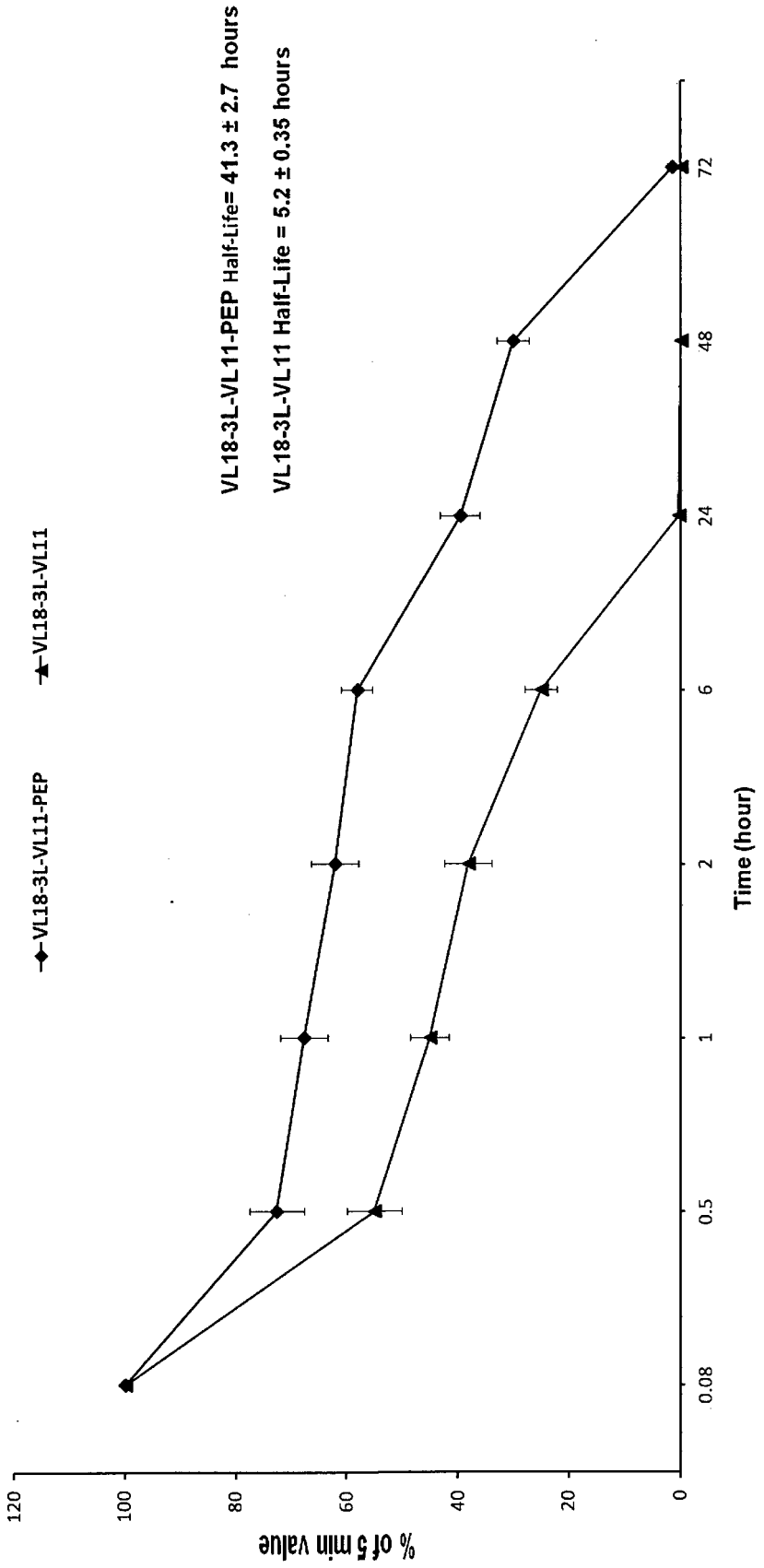

VL18-3L-VL11-PEP Half-Life= 41.3 ± 2.7 hours
VL18-3L-VL11 Half-Life = 5.2 ± 0.35 hours
VL18-3L-VL11-PEP
VL18-3L-VL11
% of 5 min value
Time (hour)
120
100
80
60
40
20
0
0.08
0.5
1
2
6
24
48
72

FIG. 3B

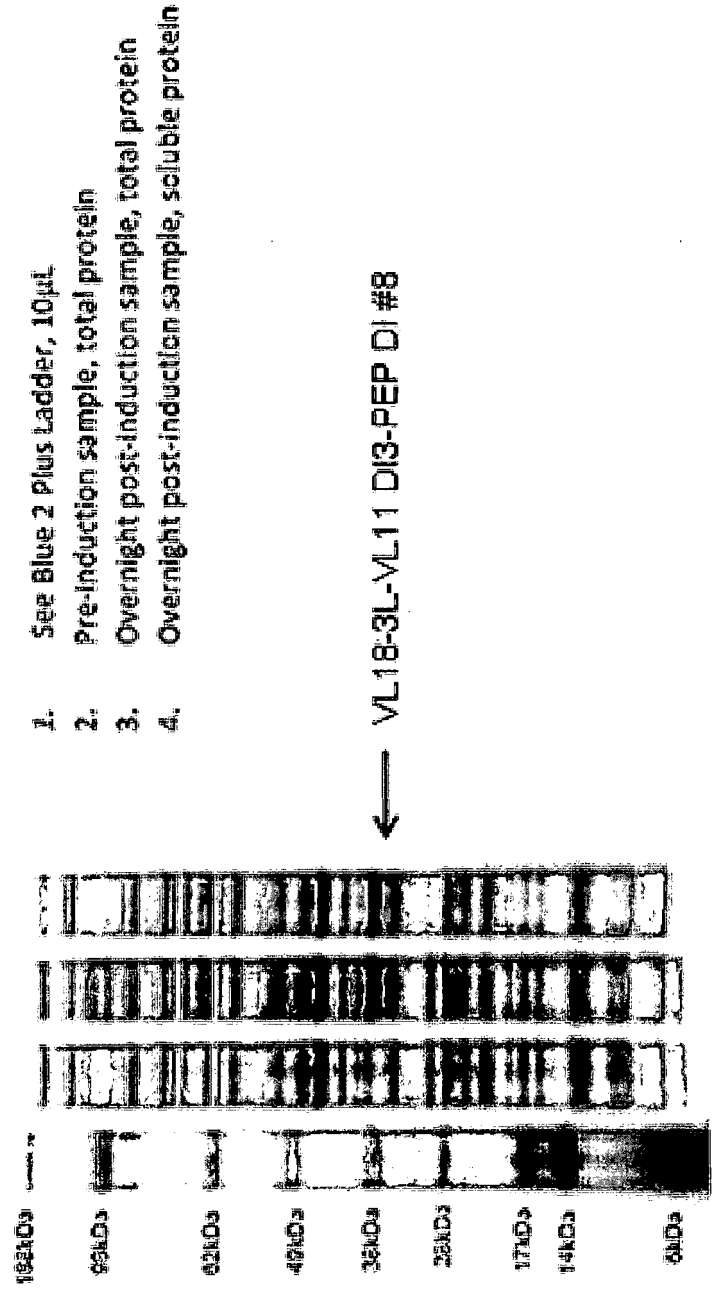

1. See Blue 2 Plus Ladder, 10µL
2. Pre-induction sample, total protein
3. Overnight post-induction sample, total protein
4. Overnight post-induction sample, soluble protein
VL18-3L-VL11 DI3-PEP DI #8
1 2 3 4
183kDa
98kDa
62kDa
49kDa
38kDa
28kDa
17kDa
14kDa
6kDa

FIG. 4

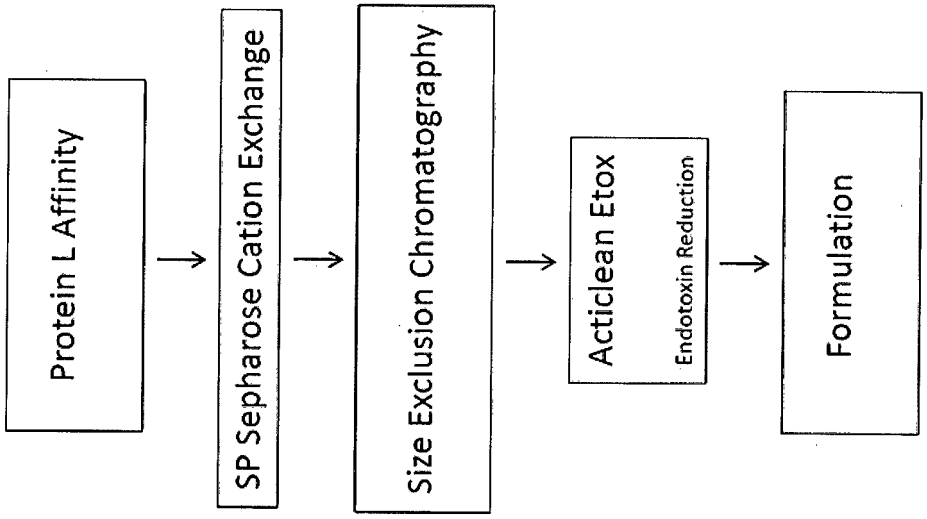
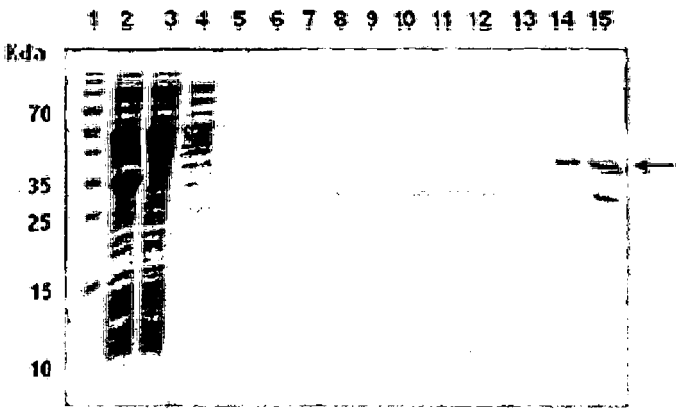

Protein L Affinity
SP Sepharose Cation Exchange
Size Exclusion Chromatography
Acticlean Etox
Endotoxin Reduction
Formulation

FIG. 5A

Gel 1

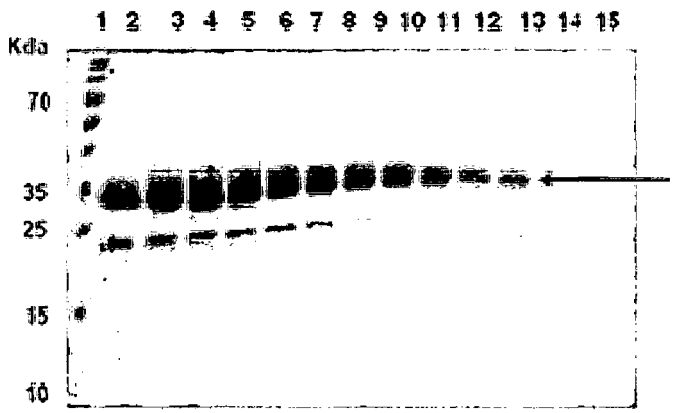


Gel 1 - SDS-PAGE coomassie Legend

Lane 1 – Marker
Lane 2 – Sluble Lysate – Protein Load
Lane 3 = Flow Through
Lane 4 – Wash 1
Lane 5 – Wash 2
Lane 6 – Wash 4
Lane 7 – Wash 6
Lane 8 – Wash 8
Lane 9 – Wash 10
Lane 10 – Elution 1
Lane 11 – Elution 3
Lane 12 – Elution 5
Lane 13 – Elution 7
Lane 14 – Elution 9
Lane 15 – Elution 10

FIG. 5B

Gel 2



Gel 2 - SDS-PAGE coomassie Legend

Lane 1 – Marker
Lane 2 = Elution 22
Lane 3 – Elution 23
Lane 4 – Elution 24
Lane 5 – Elution 25
Lane 6 – Elution 26
Lane 7 – Elution 27
Lane 8 – Elution 28
Lane 9 – Elution 29
Lane 10 – Elution 30
Lane 11 – Elution 31
Lane 12 – Elution 32
Lane 13 – Elution 33
Lane 14 – Elution 34
Lane 14 – Elution 38

FIG. 5C

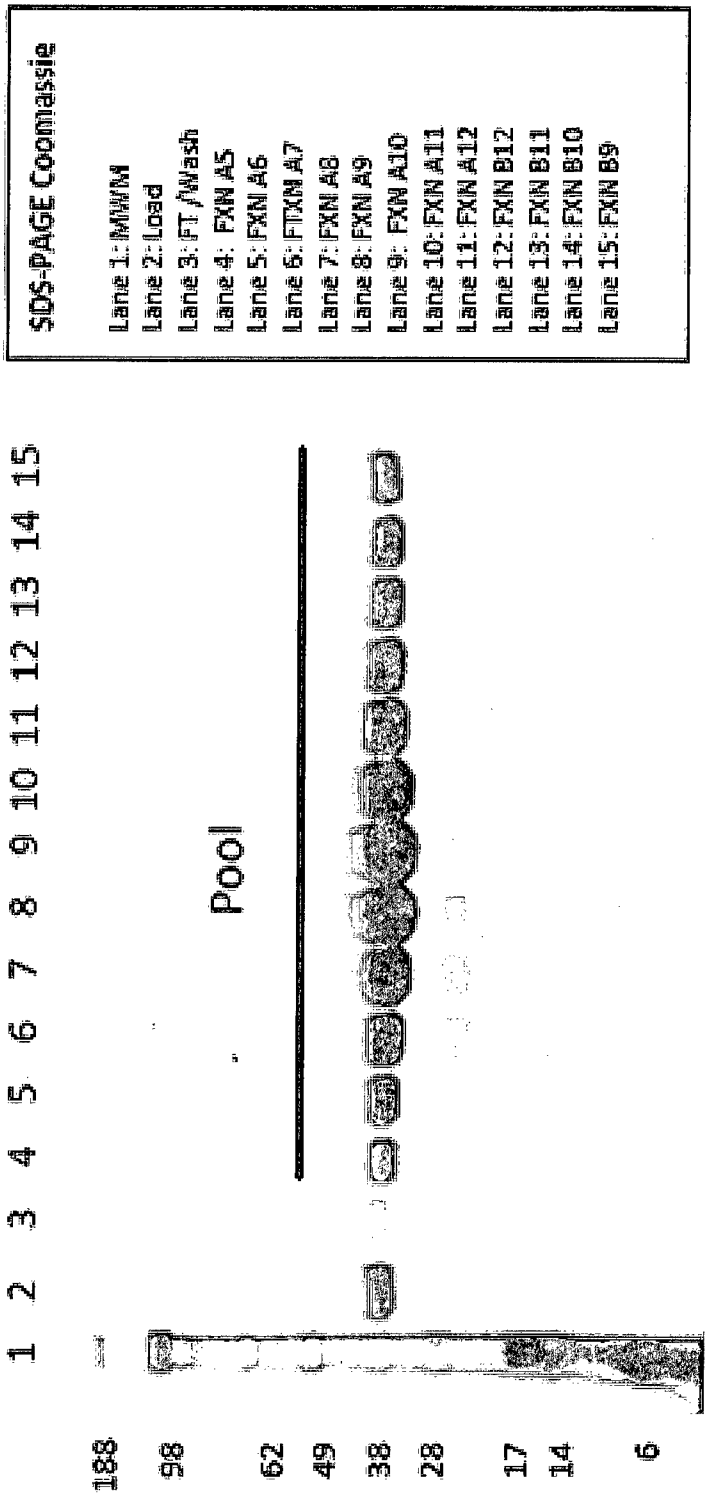

SDS-PAGE Coomassie
Lane 1: MWM
Lane 2: Load
Lane 3: FT /Wash
Lane 4: FXN A5
Lane 5: FXN A6
Lane 6: FTXN A7
Lane 7: FXN A8
Lane 8: FXN A9
Lane 9: FXN A10
Lane 10: FXN A11
Lane 11: FXN A12
Lane 12: FXN B12
Lane 13: FXN B11
Lane 14: FXN B10
Lane 15: FXN B9
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Pool
188
98
62
49
38
28
17
14
6

FIG. 5D

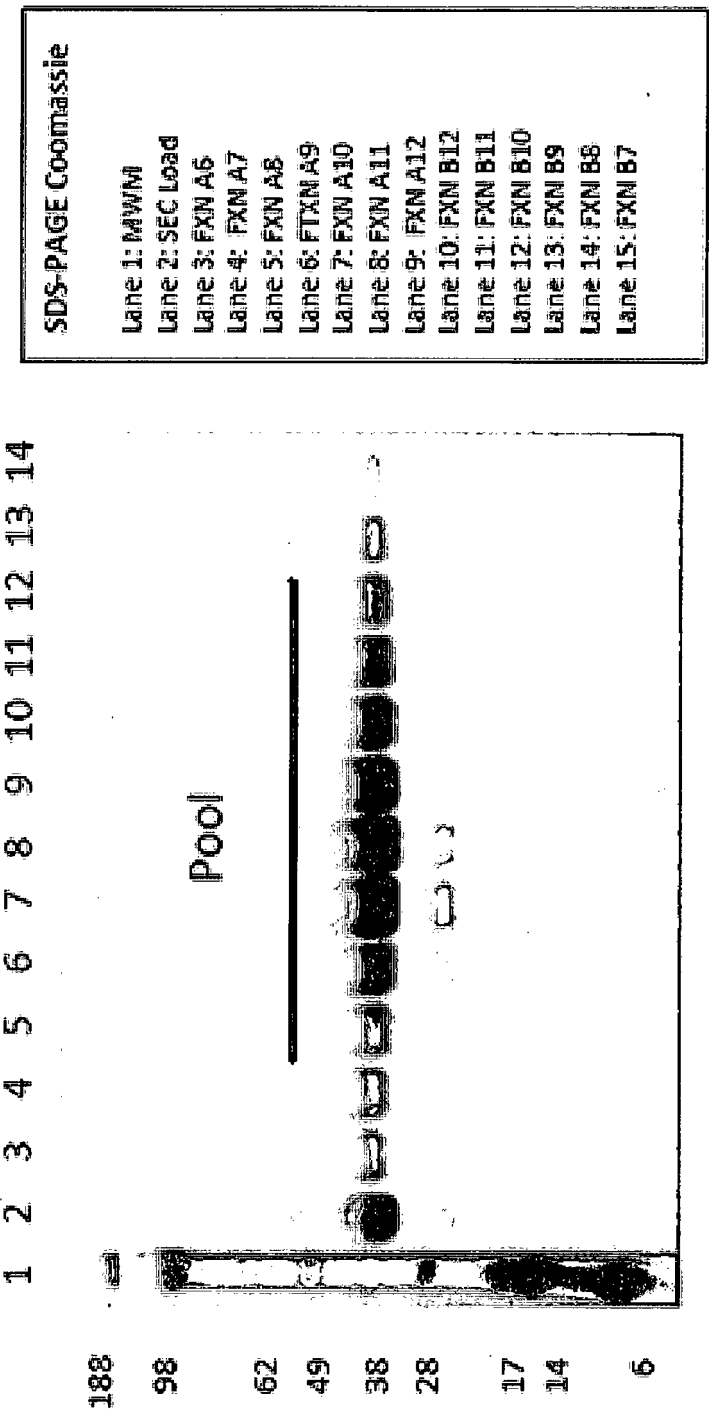

SDS-PAGE Coomassie
Lane 1: MWM
Lane 2: SEC Load
Lane 3: FXN A6
Lane 4: FXN A7
Lane 5: FXN A8
Lane 6: FTXN A9
Lane 7: FXN A10
Lane 8: FXN A11
Lane 9: FXN A12
Lane 10: FXN B12
Lane 11: FXN B11
Lane 12: FXN B10
Lane 13: FXN B9
Lane 14: FXN B8
Lane 15: FXN B7
1 2 3 4 5 6 7 8 9 10 11 12 13 14
Pool
188
98
62
49
38
28
17
14
6

FIG. 5E

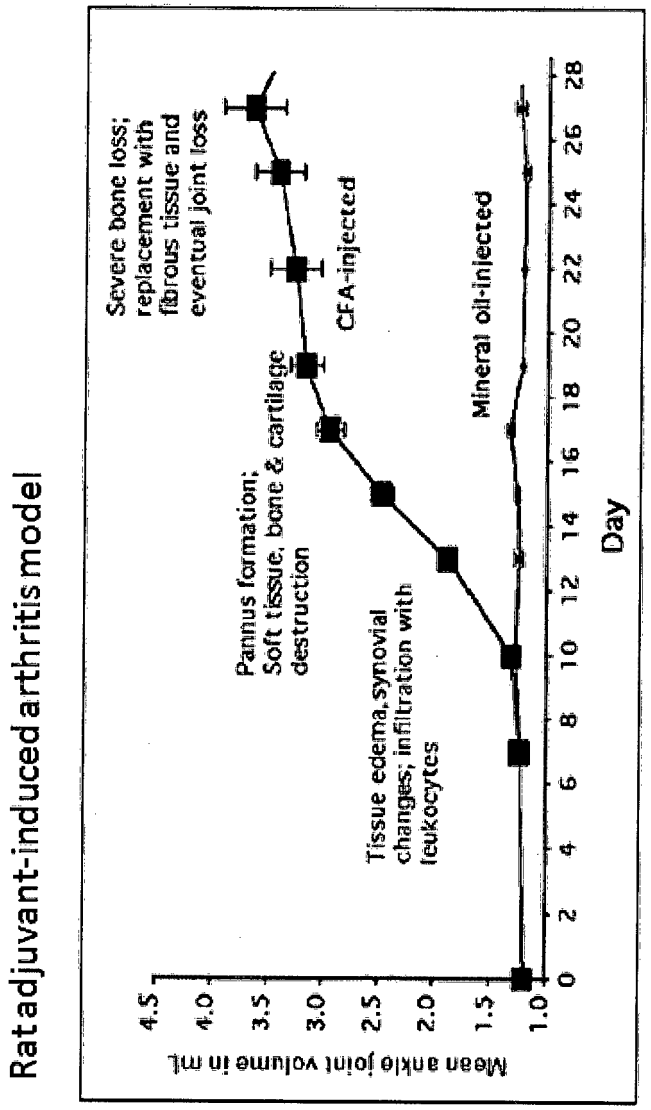

Rat adjuvant-induced arthritis model
Mean ankle joint volume in mL
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
Day
Severe bone loss; replacement with fibrous tissue and eventual joint loss
Pannus formation; Soft tissue, bone & cartilage destruction
Tissue edema,synovial changes; infiltration with leukocytes
CFA-injected
Mineral oil-injected

FIG. 6

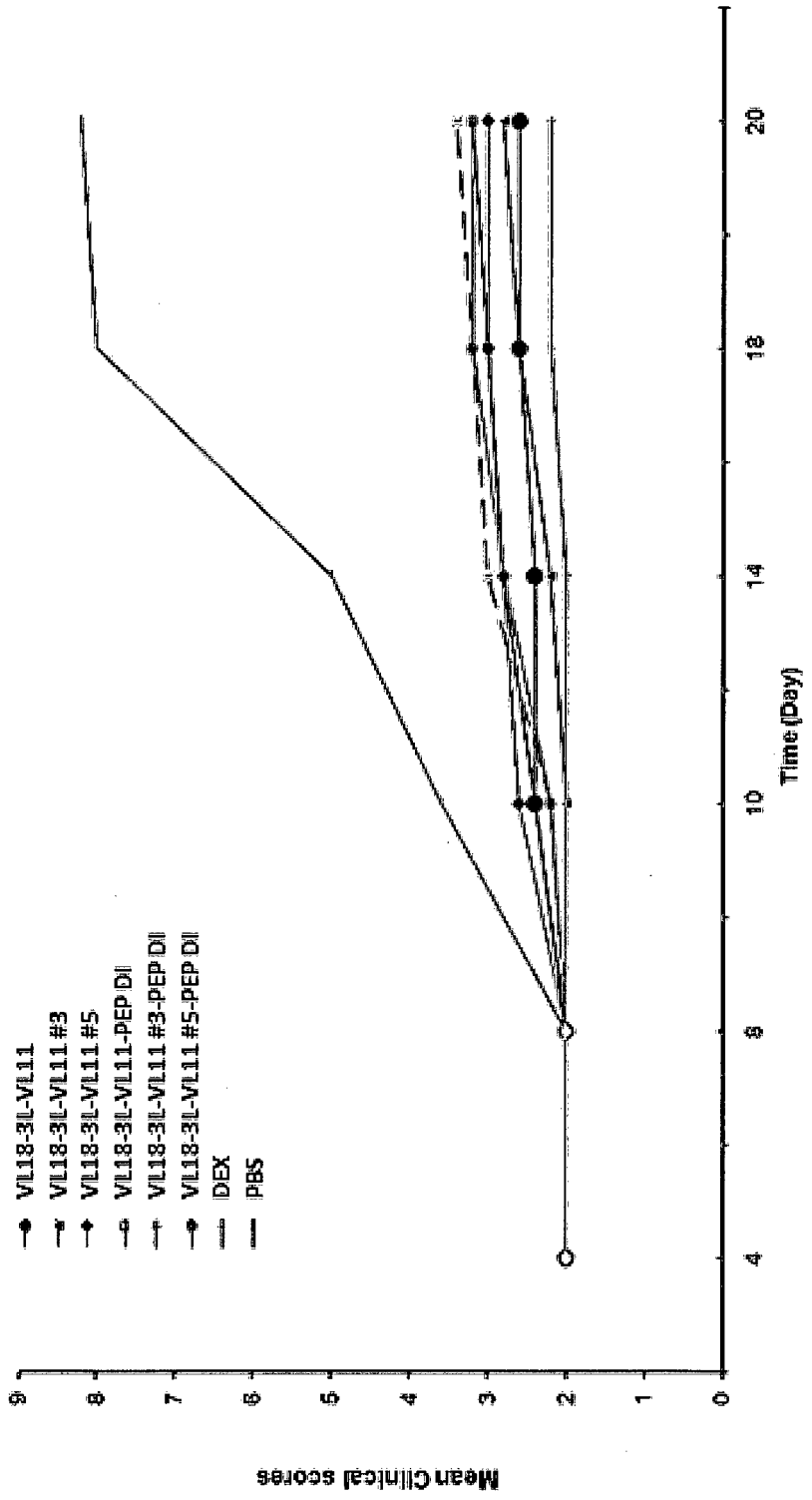

Mean Clinical scores
Time (Day)
VL18-3L-VL11
VL18-3L-VL11 #3
VL18-3L-VL11 #5
VL18-3L-VL11-PEP DII
VL18-3L-VL11 #3-PEP DII
VL18-3L-VL11 #5-PEP DII
DEX
PBS

FIG. 7



FIG. 8C



FIG. 8B



FIG. 8A

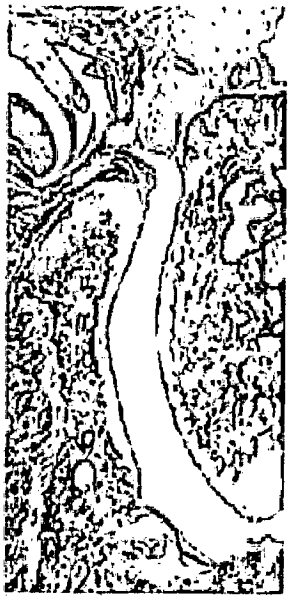


FIG. 8F

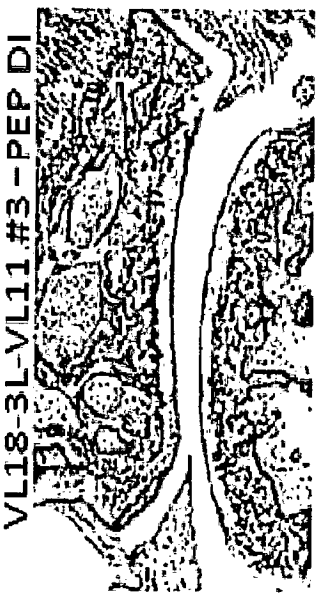


FIG. 8E

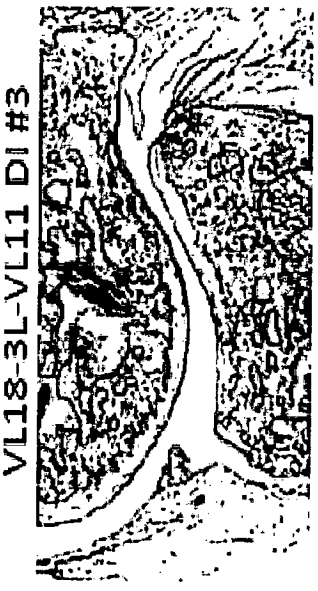


FIG. 8D

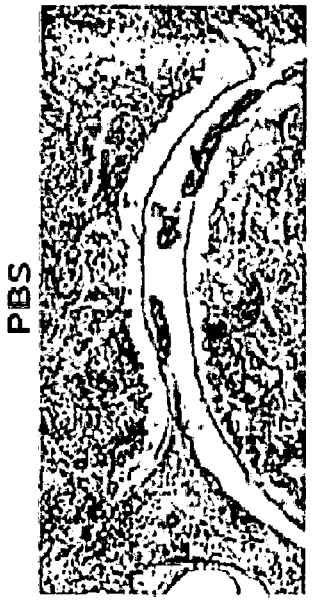


FIG. 8I

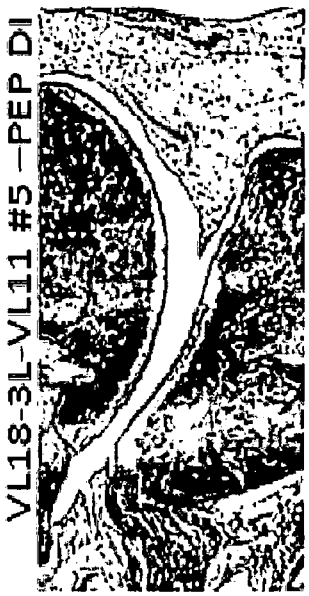


FIG. 8H

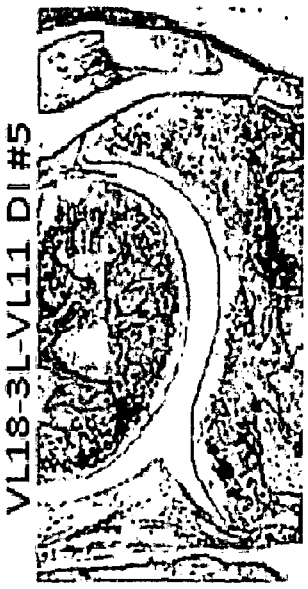


FIG. 8G

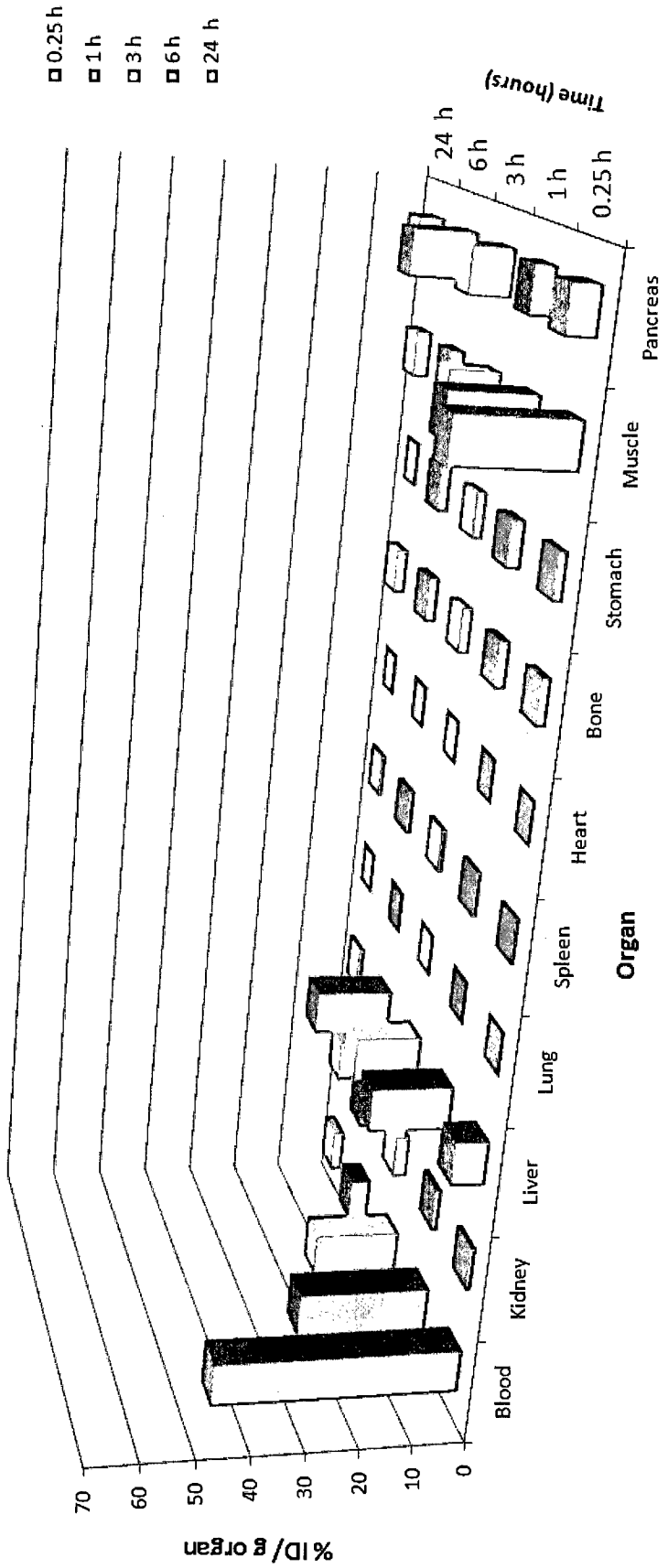

0.25 h
1 h
3 h
6 h
24 h
Time (hours)
24 h
6 h
3 h
1 h
0.25 h
% ID/ g organ
70
60
50
40
30
20
10
0
Blood
Kidney
Liver
Lung
Spleen
Heart
Bone
Stomach
Muscle
Pancreas
Organ

FIG. 9A

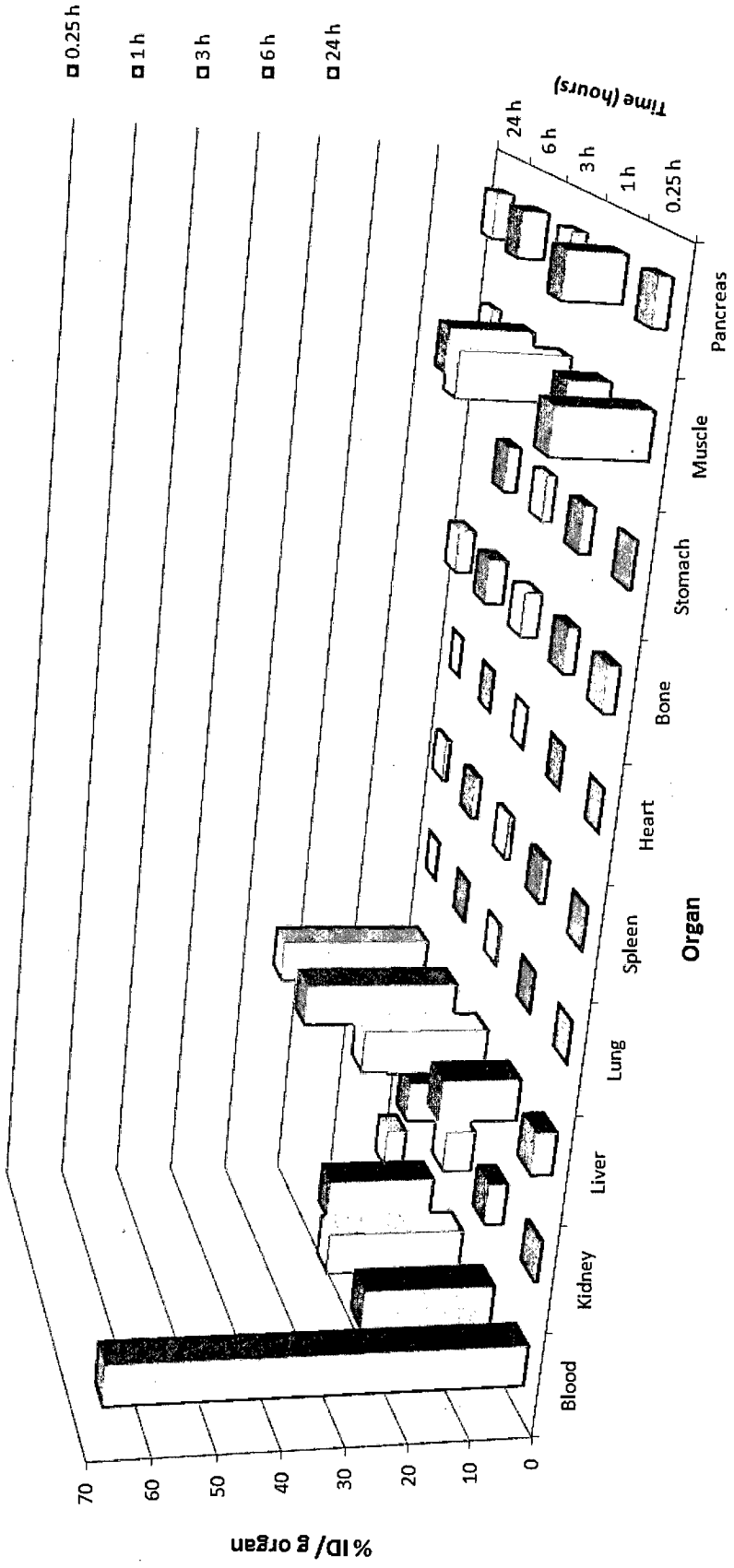

0.25 h
1 h
3 h
6 h
24 h
Time (hours)
24 h
6 h
3 h
1 h
0.25 h
%ID/g organ
70
60
50
40
30
20
10
0
Blood
Kidney
Liver
Lung
Spleen
Heart
Bone
Stomach
Muscle
Pancreas
Organ

FIG. 9B