
DIV-BBB
TERR measurements
+S4D 0.05 µg/ml
12 hr
+S4D 0.5 µg/ml
12 hr
+S4D 5 µg/ml
12 hr
+S4D 50 µg/ml
12 hr
+anti-S4D = VX15/2503 250 µg/ml
24 hr

FIG. 1

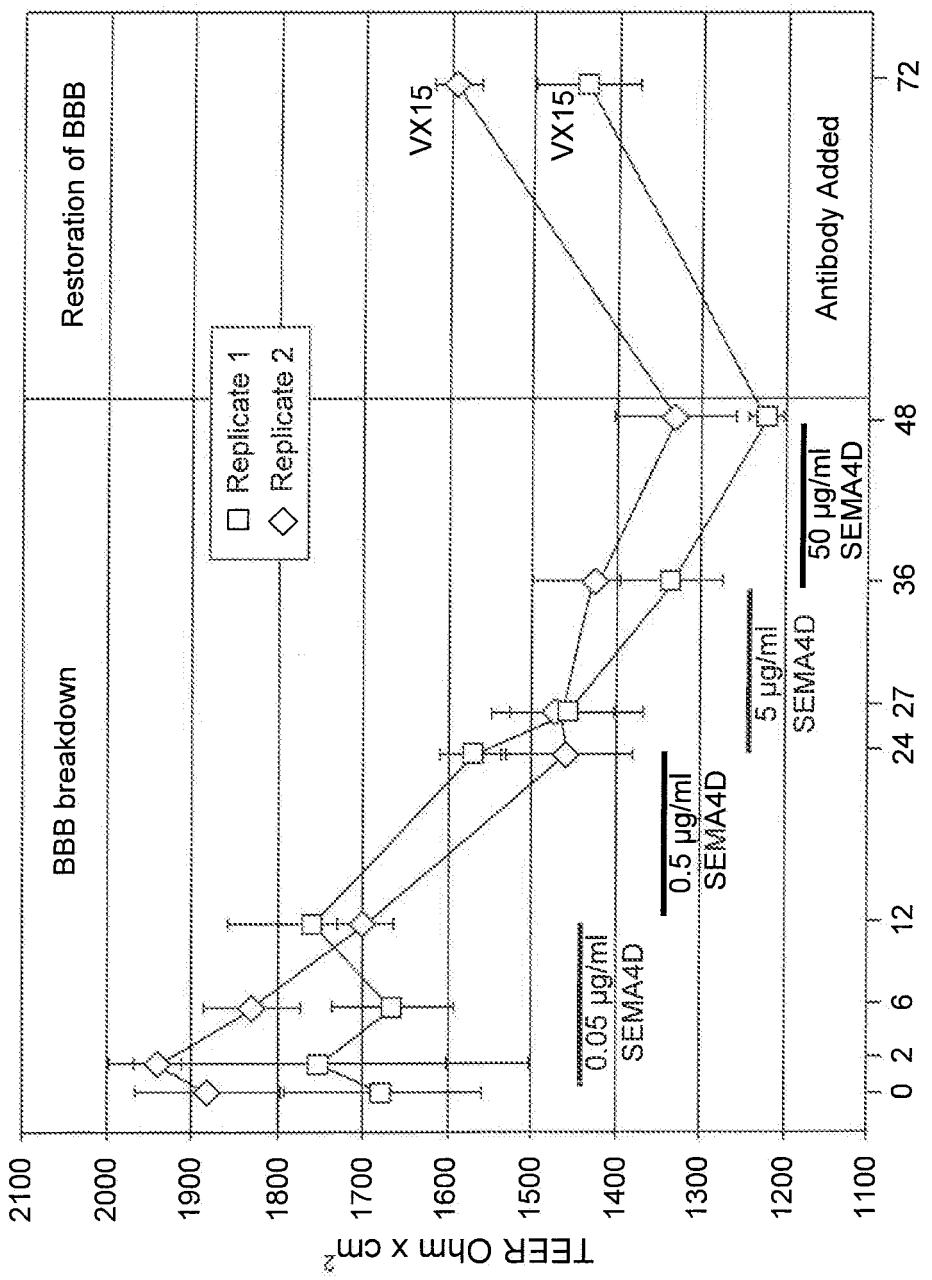

BBB breakdown
Restoration of BBB
Antibody Added
Replicate 1
Replicate 2
VX15
VX15
0.05 µg/ml SEMA4D
0.5 µg/ml SEMA4D
5 µg/ml SEMA4D
50 µg/ml SEMA4D
TEER Ohm x cm²
Time (hours)
2100
2000
1900
1800
1700
1600
1500
1400
1300
1200
1100
0
2
6
12
24
27
36
48
72

FIG. 2

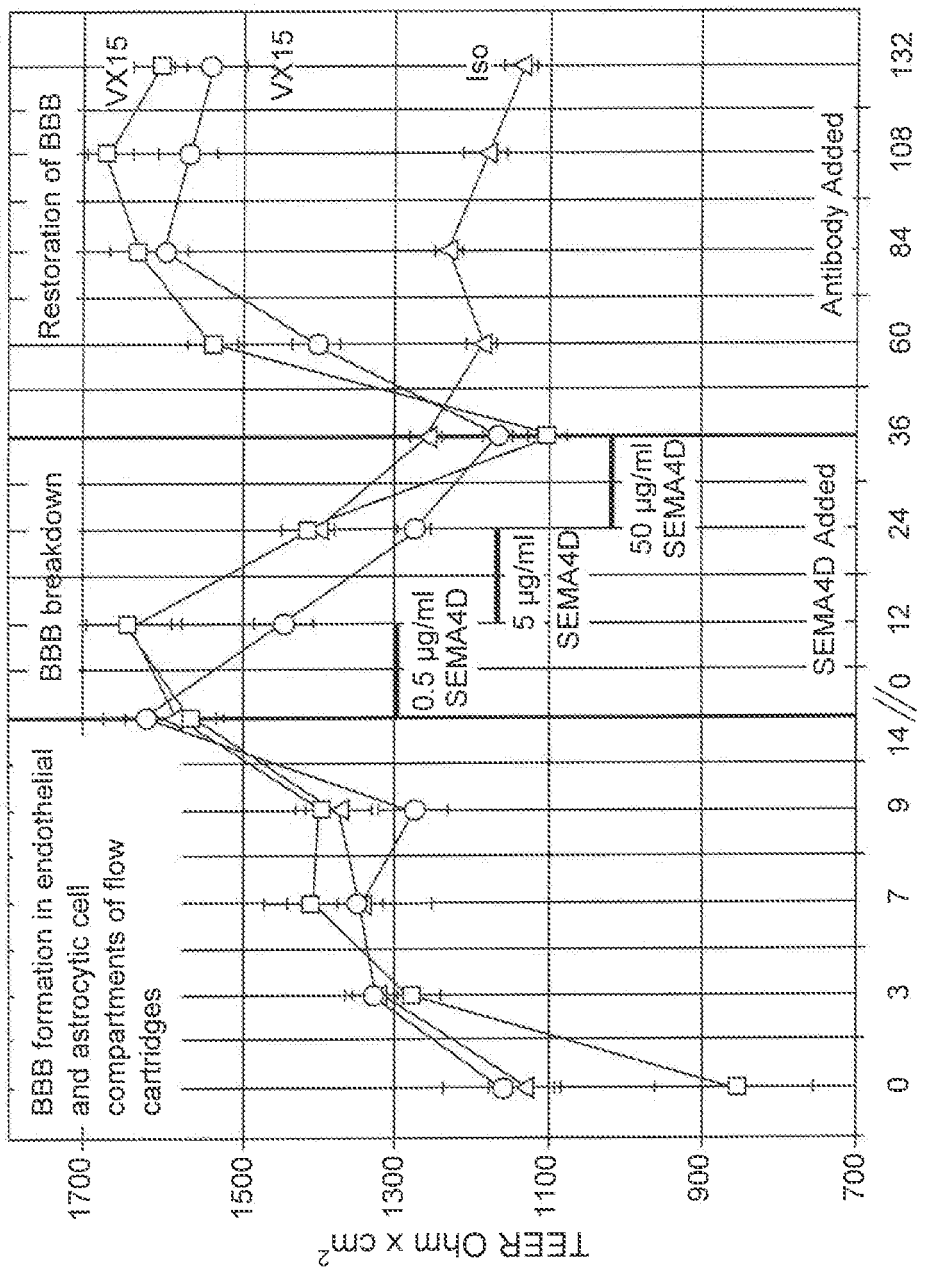

BBB formation in endothelial and astrocytic cell compartments of flow cartridges
BBB breakdown
Restoration of BBB
VX15
VX15
Iso
0.5 µg/ml SEMA4D
5 µg/ml SEMA4D
50 µg/ml SEMA4D
SEMA4D Added
Antibody Added
TEER Ohm x cm²
1700
1500
1300
1100
900
700
0
3
7
9
14
0
12
24
36
60
84
108
132
Days
Hours

FIG. 3

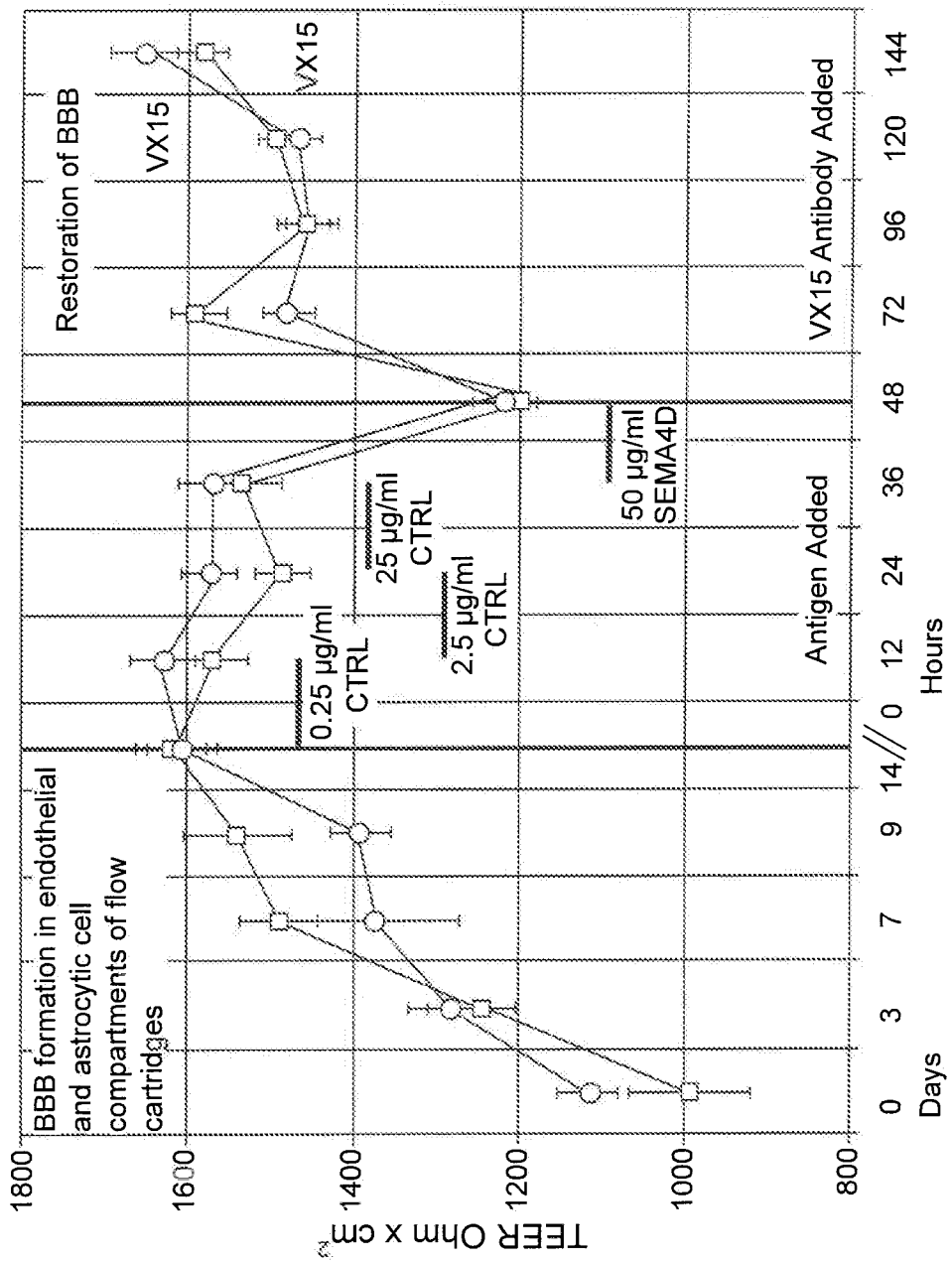

BBB formation in endothelial and astrocytic cell compartments of flow cartridges
Restoration of BBB
VX15
VX15
0.25 µg/ml CTRL
25 µg/ml CTRL
2.5 µg/ml CTRL
50 µg/ml SEMA4D
Antigen Added
VX15 Antibody Added
TEER Ohm x cm²
1800
1600
1400
1200
1000
800
0
3
7
9
14
0
12
24
36
48
72
96
120
144
Days
Hours

FIG. 4

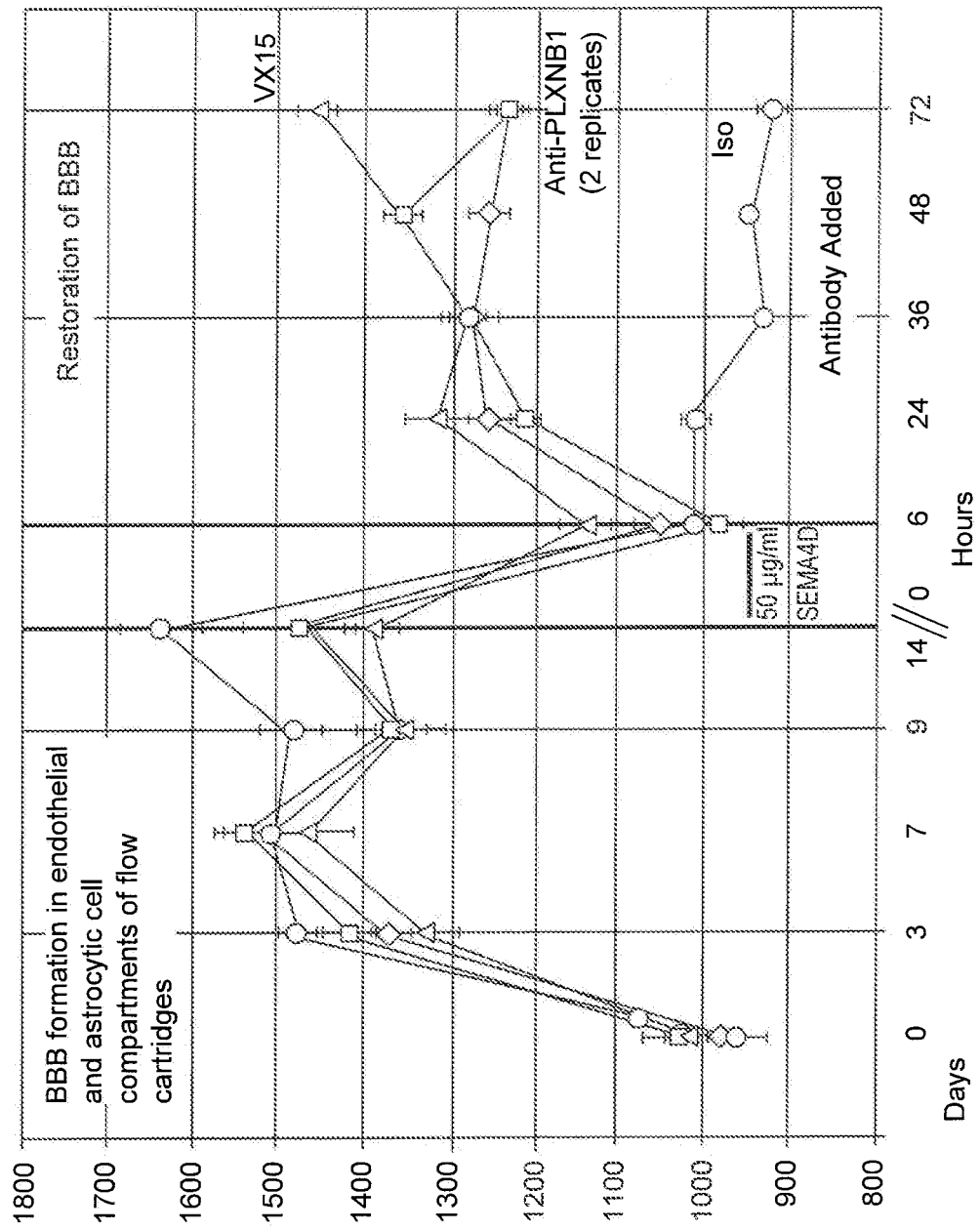

BBB formation in endothelial and astrocytic cell compartments of flow cartridges
Restoration of BBB
VX15
Anti-PLXNB1 (2 replicates)
Iso
50 µg/ml SEMA4D
Antibody Added
Days
Hours
0
3
7
9
14
0
6
24
36
48
72
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800

FIG. 5

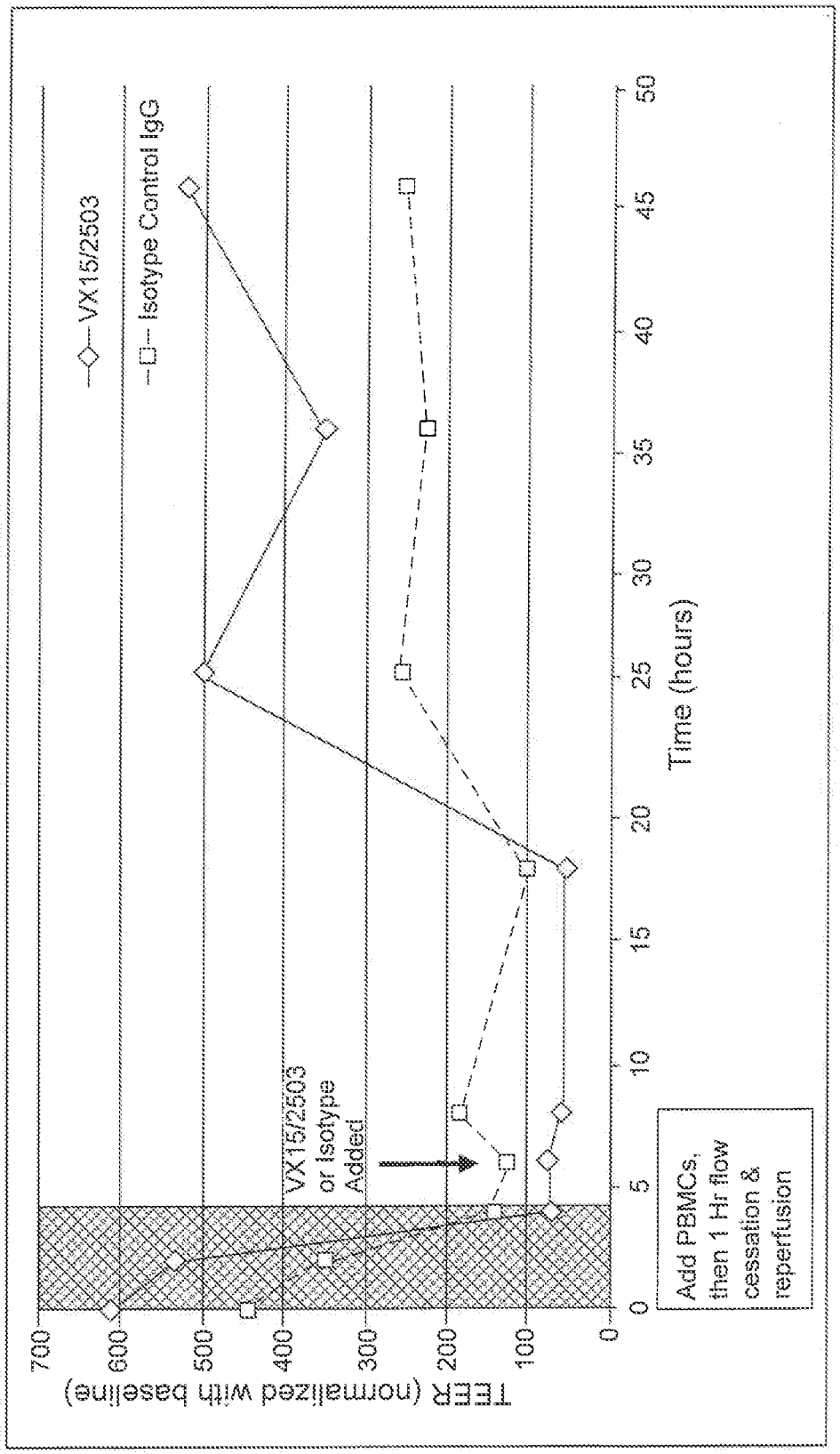

VX15/2503
Isotype Control IgG
TEER (normalized with baseline)
Time (hours)
VX15/2503 or Isotype Added
Add PBMCs, then 1 Hr flow cessation & reperfusion
0
100
200
300
400
500
600
700
0
5
10
15
20
25
30
35
40
45
50

FIG. 6

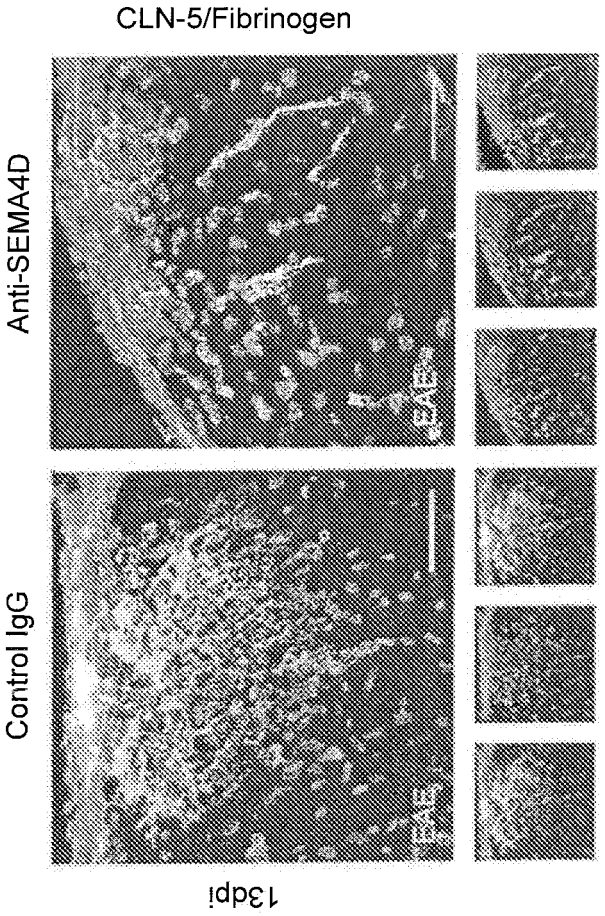


FIG. 7A

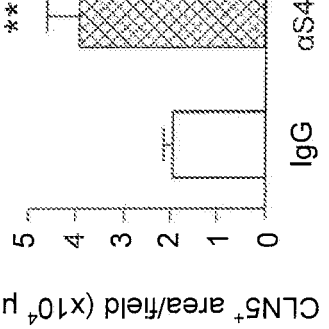


FIG. 7B

FIG. 7C

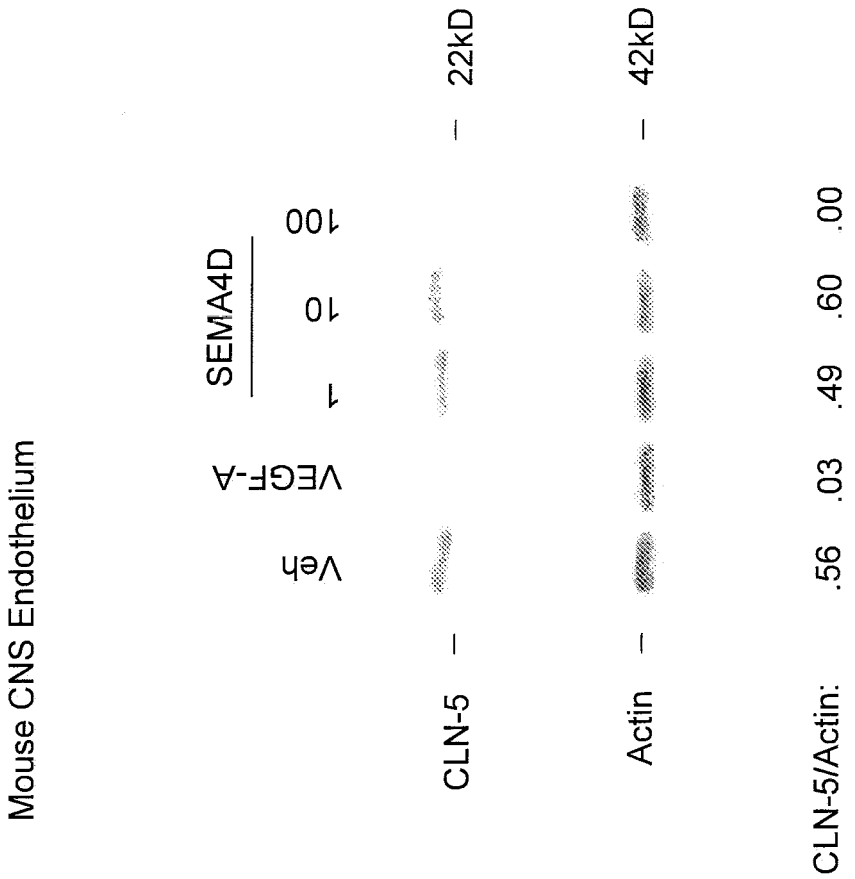

Mouse CNS Endothelium
SEMA4D
Veh
VEGF-A
1
10
100
CLN-5
22kD
Actin
42kD
CLN-5/Actin:
.56
.03
.49
.60
.00

FIG. 8