```
   1 GAT GCA CAC AAG AGT GAG GTT GCT CAT CGG TTT AAA GAT TTG GGA GAA GAA AAT TTC AAA  60
   1 D   A   H   K   S   E   V   A   H   R   F   K   D   L   G   E   E   N   F   K   20

  61 GCC TTG GTG TTG ATT GCC TTT GCT CAG TAT CTT CAG CAG TGT CCA TTT GAA GAT CAT GTA 120
  21 A   L   V   L   I   A   F   A   Q   Y   L   Q   Q   C   P   F   E   D   H   V   40

 121 AAA TTA GTG AAT GAA GTA ACT GAA TTT GCA AAA ACA TGT GTT GCT GAT GAG TCA GCT GAA 180
  41 K   L   V   N   E   V   T   E   F   A   K   T   C   V   A   D   E   S   A   E   60

 181 AAT TGT GAC AAA TCA CTT CAT ACC CTT TTT GGA GAC AAA TTA TGC ACA GTT GCA ACT CTT 240
  61 N   C   D   K   S   L   H   T   L   F   G   D   K   L   C   T   V   A   T   L   80

 241 CGT GAA ACC TAT GGT GAA ATG GCT GAC TGC TGT GCA AAA CAA GAA CCT GAG AGA AAT GAA 300
  81 R   E   T   Y   G   E   M   A   D   C   C   A   K   Q   E   P   E   R   N   E  100

 301 TGC TTC TTG CAA CAC AAA GAT GAC AAC CCA AAC CTC CCC CGA TTG GTG AGA CCA GAG GTT 360
 101 C   F   L   Q   H   K   D   D   N   P   N   L   P   R   L   V   R   P   E   V  120

 361 GAT GTG ATG TGC ACT GCT TTT CAT GAC AAT GAA GAG ACA TTT TTG AAA AAA TAC TTA TAT 420
 121 D   V   M   C   T   A   F   H   D   N   E   E   T   F   L   K   K   Y   L   Y  140

 421 GAA ATT GCC AGA AGA CAT CCT TAC TTT TAT GCC CCG GAA CTC CTT TTC TTT GCT AAA AGG 480
 141 E   I   A   R   R   H   P   Y   F   Y   A   P   E   L   L   F   F   A   K   R  160
```

Figure 1A

```
481 TAT AAA GCT GCT TTT ACA GAA TGT TGC CAA GCT GCT GAT AAA GCT GCC TGC CTG TTG CCA 540
161 Y   K   A   A   F   T   E   C   C   Q   A   A   D   K   A   A   C   L   L   P   180

541 AAG CTC GAT GAA CTT CGG GAT GAA GGG AAG GCT TCG TCT GCC AAA CAG AGA CTC AAA TGT 600
181 K   L   D   E   L   R   D   E   G   K   A   S   S   A   K   Q   R   L   K   C   200

601 GCC AGT CTC CAA AAA TTT GGA GAA AGA GCT TTC AAA GCA TGG GCA GTG GCT CGC CTG AGC 660
201 A   S   L   Q   K   F   G   E   R   A   F   K   A   W   A   V   A   R   L   S   220

661 CAG AGA TTT CCC AAA GCT GAG TTT GCA GAA GTT TCC AAG TTA GTG ACA GAT CTT ACC AAA 720
221 Q   R   F   P   K   A   E   F   A   E   V   S   K   L   V   T   D   L   T   K   240

721 GTC CAC ACG GAA TGC TGC CAT GGA GAT CTG CTT GAA TGT GCT GAT GAC AGG GCG GAC CTT 780
241 V   H   T   E   C   C   H   G   D   L   L   E   C   A   D   D   R   A   D   L   260

781 GCC AAG TAT ATC TGT GAA AAT CAG GAT TCG ATC TCC AGT AAA CTG AAG GAA TGC TGT GAA 840
261 A   K   Y   I   C   E   N   Q   D   S   I   S   S   K   L   K   E   C   C   E   280

841 AAA CCT CTG TTG GAA AAA TCC CAC TGC ATT GCC GAA GTG GAA AAT GAT GAG ATG CCT GCT 900
281 K   P   L   L   E   K   S   H   C   I   A   E   V   E   N   D   E   M   P   A   300

901 GAC TTG CCT TCA TTA GCT GCT GAT TTT GTT GAA AGT AAG GAT GTT TGC AAA AAC TAT GCT 960
301 D   L   P   S   L   A   A   D   F   V   E   S   K   D   V   C   K   N   Y   A   320
```

Figure 1B

```
 961 GAG GCA AAG GAT GTC TTC CTG GGC ATG TTT TTG TAT GAA TAT GCA AGA AGG CAT CCT GAT 1020
 321 E   A   K   D   V   F   L   G   M   F   L   Y   E   Y   A   R   R   H   P   D   340

1021 TAC TCT GTC GTG CTG CTG CTG AGA CTT GCC AAG ACA TAT GAA ACC ACT CTA GAG AAG TGC 1080
 341 Y   S   V   V   L   L   L   R   L   A   K   T   Y   E   T   T   L   E   K   C   360

1081 TGT GCC GCT GCA GAT CCT CAT GAA TGC TAT GCC AAA GTG TTC GAT GAA TTT AAA CCT CTT 1140
 361 C   A   A   A   D   P   H   E   C   Y   A   K   V   F   D   E   F   K   P   L   380

1141 GTG GAA GAG CCT CAG AAT TTA ATC AAA CAA AAC TGT GAG CTT TTT GAG CAG CTT GGA GAG 1200
 381 V   E   E   P   Q   N   L   I   K   Q   N   C   E   L   F   E   Q   L   G   E   400

1201 TAC AAA TTC CAG AAT GCG CTA TTA GTT CGT TAC ACC AAG AAA GTA CCC CAA GTG TCA ACT 1260
 401 Y   K   F   Q   N   A   L   L   V   R   Y   T   K   K   V   P   Q   V   S   T   420

1261 CCA ACT CTT GTA GAG GTC TCA AGA AAC CTA GGA AAA GTG GGC AGC AAA TGT TGT AAA CAT 1320
 421 P   T   L   V   E   V   S   R   N   L   G   K   V   G   S   K   C   C   K   H   440

1321 CCT GAA GCA AAA AGA ATG CCC TGT GCA GAA GAC TAT CTA TCC GTG GTC CTG AAC CAG TTA 1380
 441 P   E   A   K   R   M   P   C   A   E   D   Y   L   S   V   V   L   N   Q   L   460

1381 TGT GTG TTG CAT GAG AAA ACG CCA GTA AGT GAC AGA GTC ACA AAA TGC TGC ACA GAG TCC 1440
 461 C   V   L   H   E   K   T   P   V   S   D   R   V   T   K   C   C   T   E   S   480
```

Figure 1C

```
1441 TTG GTG AAC AGG CGA CCA TGC TTT TCA GCT CTG GAA GTC GAT GAA ACA TAC GTT CCC AAA 1500
 481 L   V   N   R   R   P   C   F   S   A   L   E   V   D   E   T   Y   V   P   K   500

1501 GAG TTT AAT GCT GAA ACA TTC ACC TTC CAT GCA GAT ATA TGC ACA CTT TCT GAG AAG GAG 1560
 501 E   F   N   A   E   T   F   T   F   H   A   D   I   C   T   L   S   E   K   E   520

1561 AGA CAA ATC AAG AAA CAA ACT GCA CTT GTT GAG CTT GTG AAA CAC AAG CCC AAG GCA ACA 1620
 521 R   Q   I   K   K   Q   T   A   L   V   E   L   V   K   H   K   P   K   A   T   540

1621 AAA GAG CAA CTG AAA GCT GTT ATG GAT GAT TTC GCA GCT TTT GTA GAG AAG TGC TGC AAG 1680
 541 K   E   Q   L   K   A   V   M   D   D   F   A   A   F   V   E   K   C   C   K   560

1681 GCT GAC GAT AAG GAG ACC TGC TTT GCC GAG GAG GGT AAA AAA CTT GTT GCT GCA AGT CAA 1740
 561 A   D   D   K   E   T   C   F   A   E   E   G   K   K   L   V   A   A   S   Q   580

1741 GCT GCC TTA GGC TTA TAA CAT CTA CAT TTA AAA GCA TCT CAG 1782
 581 A   A   L   G   L   *                               585
```

Figure 1D

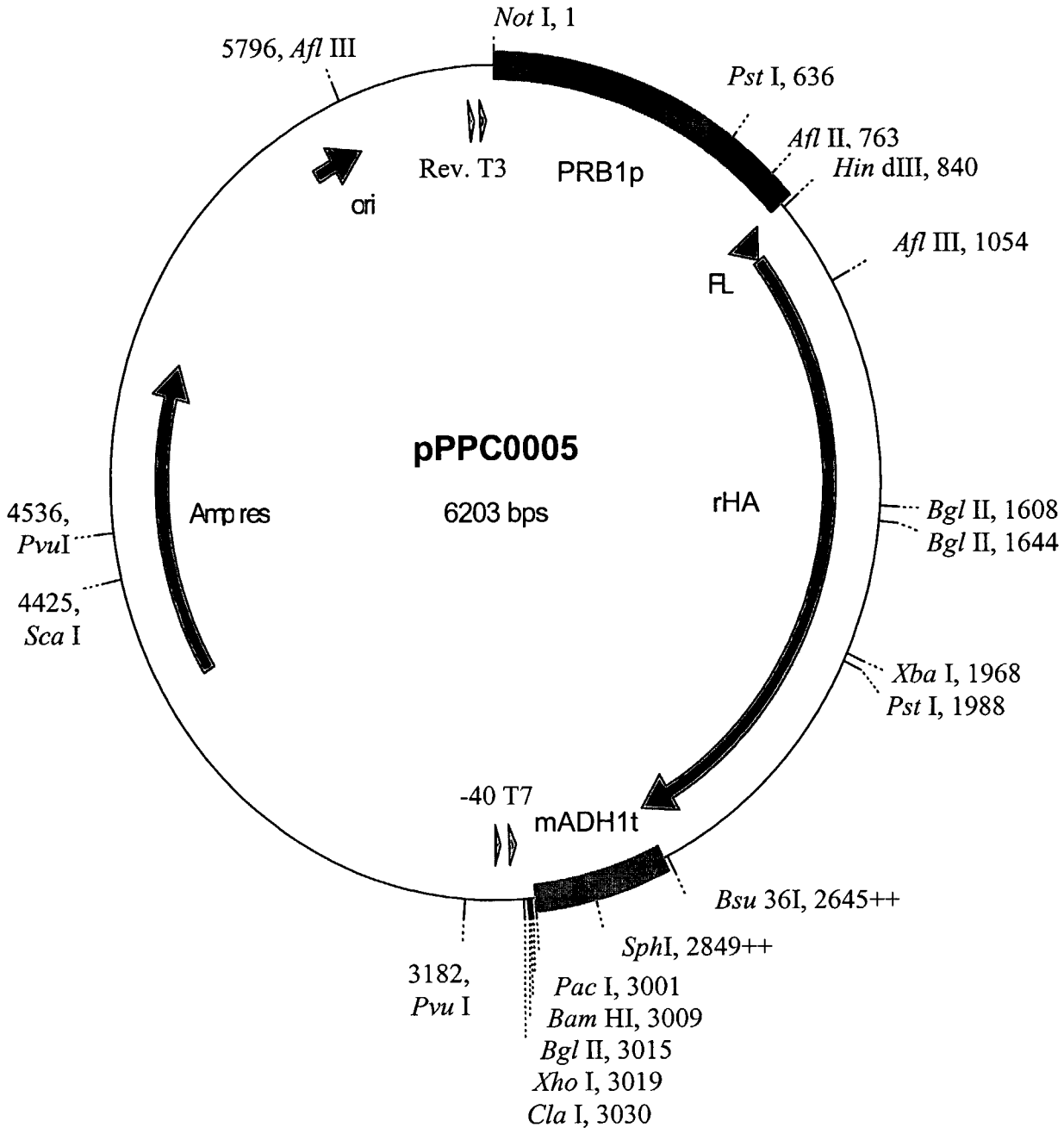

Not I, 1
5796, Afl III
Pst I, 636
Afl II, 763
Hin dIII, 840
Afl III, 1054
Rev. T3
PRB1p
ori
FL
pPPC0005
6203 bps
rHA
Amp res
4536,
PvuI
4425,
Sca I
Bgl II, 1608
Bgl II, 1644
Xba I, 1968
Pst I, 1988
-40 T7
mADH1t
Bsu 36I, 2645++
SphI, 2849++
3182,
Pvu I
Pac I, 3001
Bam HI, 3009
Bgl II, 3015
Xho I, 3019
Cla I, 3030

Figure 2

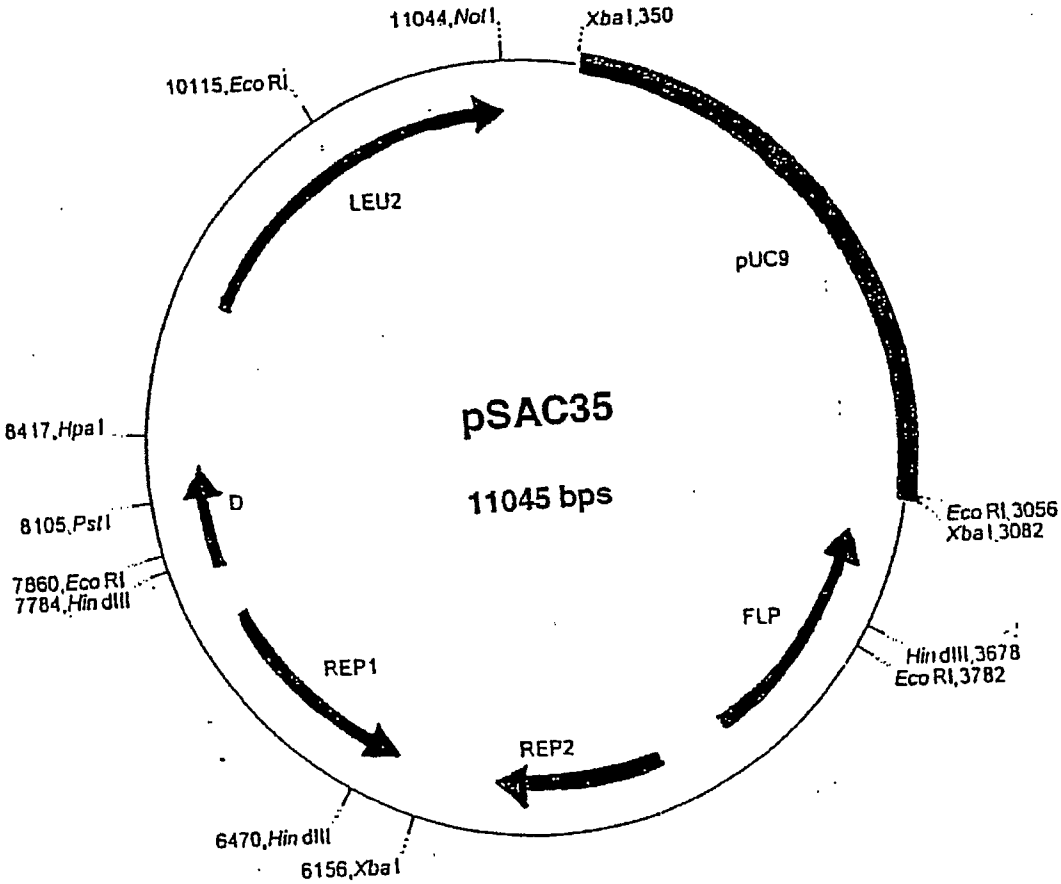

11044,NotI
XbaI,350
10115,EcoRI
LEU2
pUC9
pSAC35
11045 bps
8417,HpaI
D
8105,PstI
7860,EcoRI
7784,HindIII
REP1
FLP
EcoRI,3056
XbaI,3082
HindIII,3678
EcoRI,3782
REP2
6470,HindIII
6156,XbaI

Figure 3

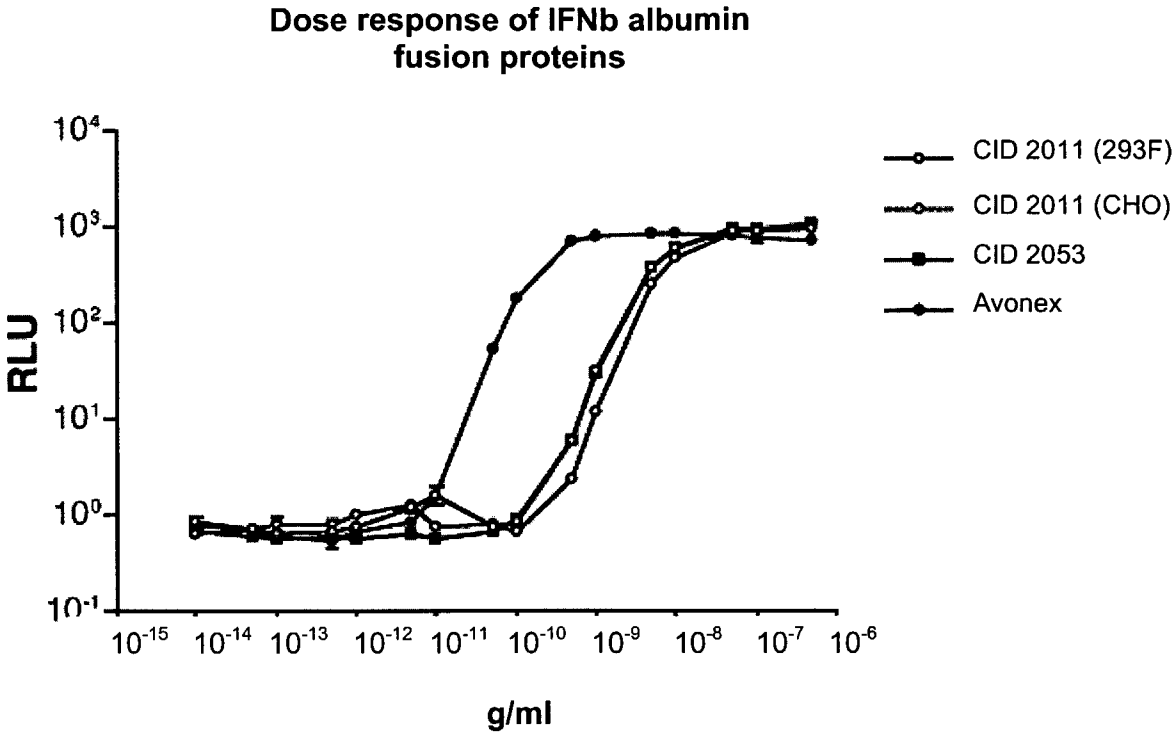

Dose response of IFNb albumin fusion proteins
RLU
10⁴
10³
10²
10¹
10⁰
10⁻¹
10⁻¹⁵ 10⁻¹⁴ 10⁻¹³ 10⁻¹² 10⁻¹¹ 10⁻¹⁰ 10⁻⁹ 10⁻⁸ 10⁻⁷ 10⁻⁶
g/ml
CID 2011 (293F)
CID 2011 (CHO)
CID 2053
Avonex

Figure 4

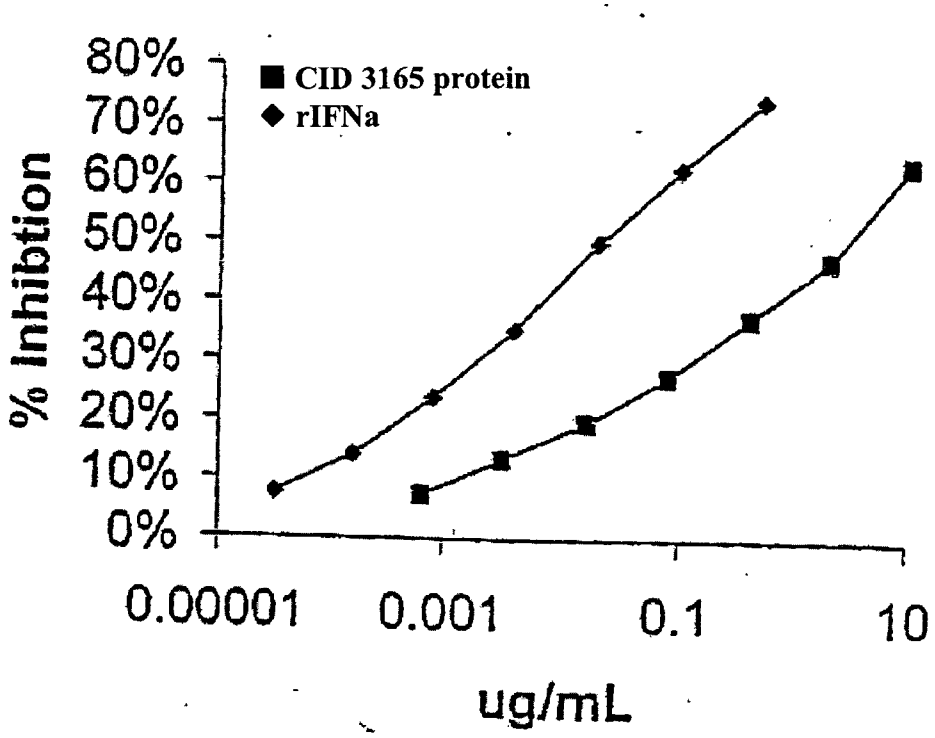

Inhibition of proliferation of HS294T melanoma cells
by IFNa albumin fusion protein
80%
70%
60%
50%
40%
30%
20%
10%
0%
% Inhibtion
CID 3165 protein
rIFNa
0.00001
0.001
0.1
10
ug/mL

Figure 5

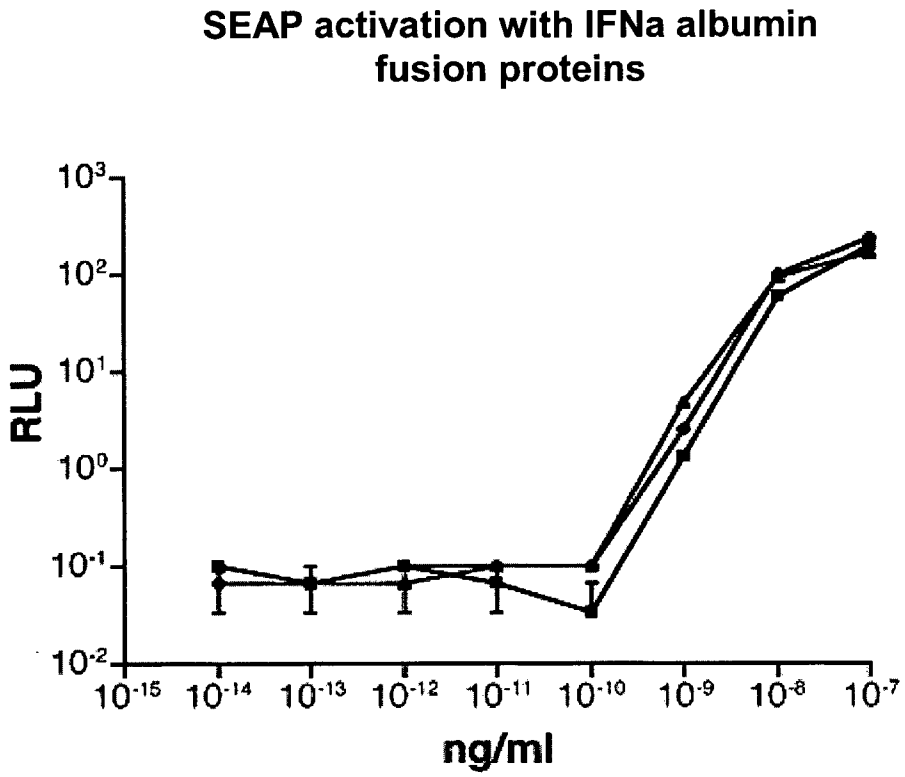

SEAP activation with IFNa albumin fusion proteins
RLU
10^3
10^2
10^1
10^0
10^-1
10^-2
10^-15 10^-14 10^-13 10^-12 10^-11 10^-10 10^-9 10^-8 10^-7
ng/ml

Figure 6

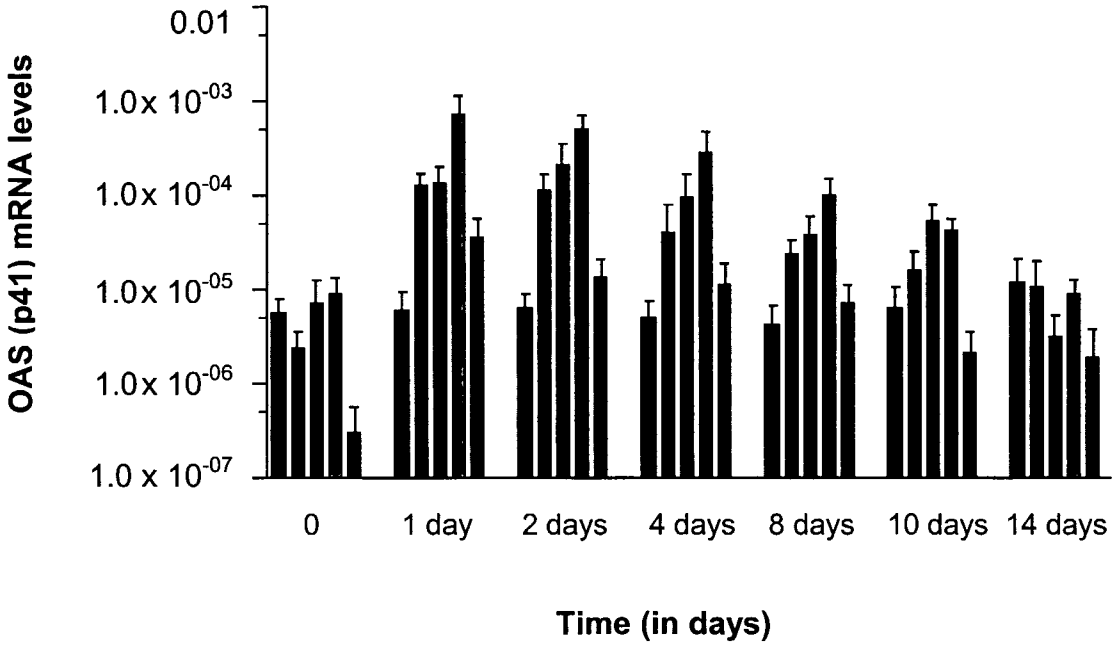

OAS (p41) mRNA levels
0.01
1.0x 10-03
1.0x 10-04
1.0x 10-05
1.0x 10-06
1.0 x 10-07
0
1 day
2 days
4 days
8 days
10 days
14 days
Time (in days)

Figure 7

Dose-response of recombinant BNP
and BNP Albumin Fusion Proteins —
BNP-HSA and BNP(2X)-HSA

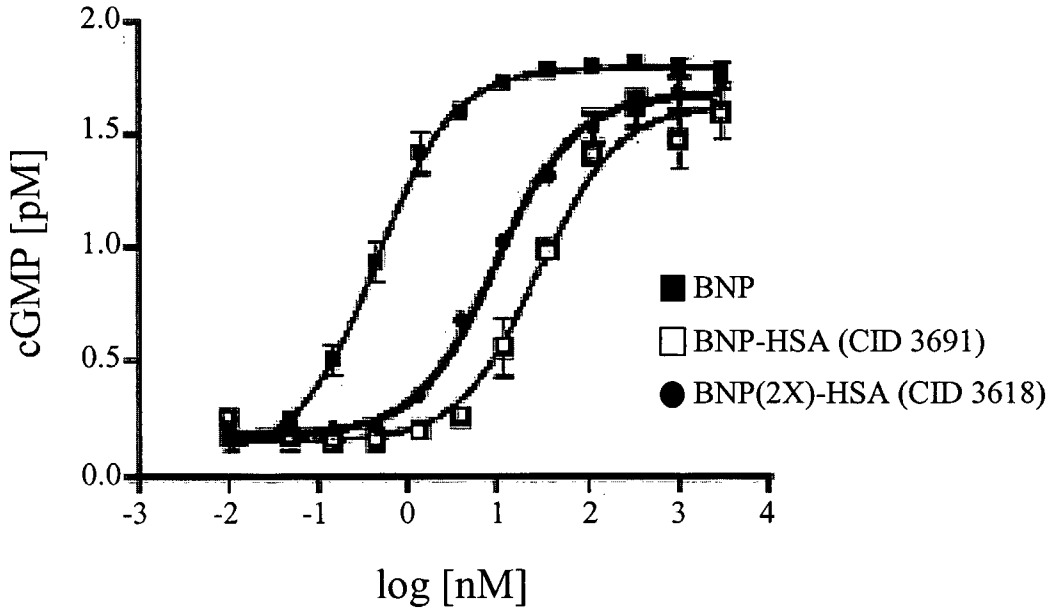


Figure 8

Effect of BNP Albumin Fusion Proteins
on Mean Arterial Pressure in
Spontaneously Hypertensive Rats

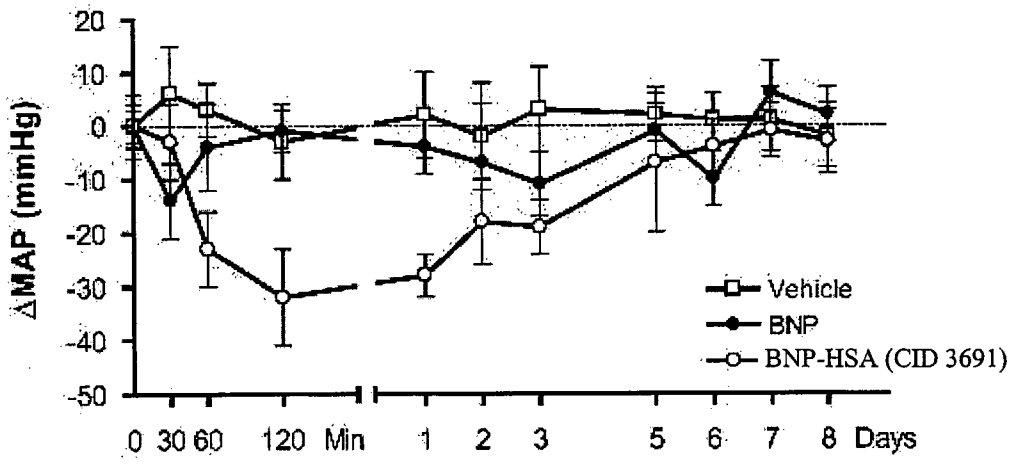


Figure 9

In Vivo cGMP Levels in Mice After an Intravenous Injection of Recombinant BNP or BNP Albumin Fusion Proteins

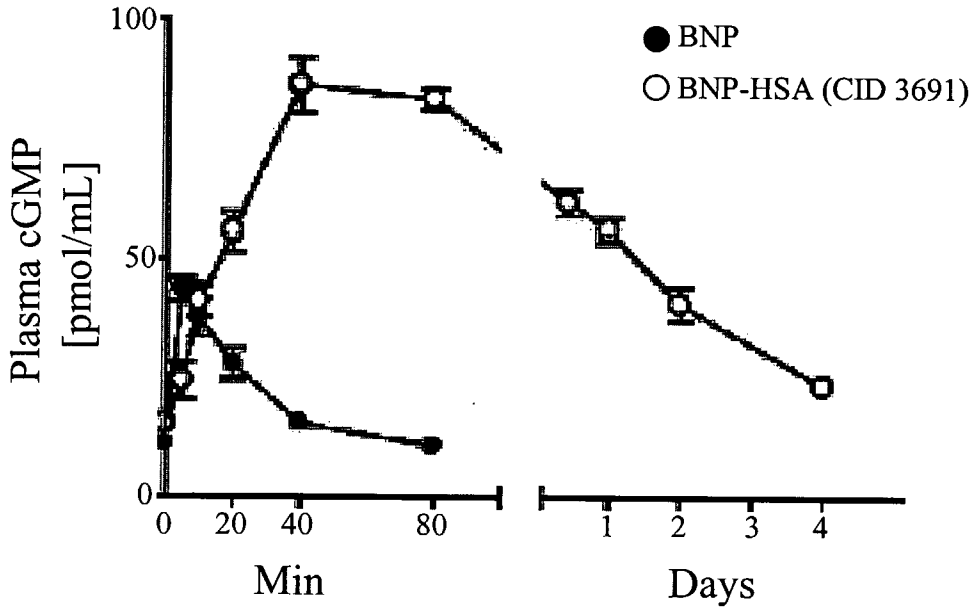


Figure 10

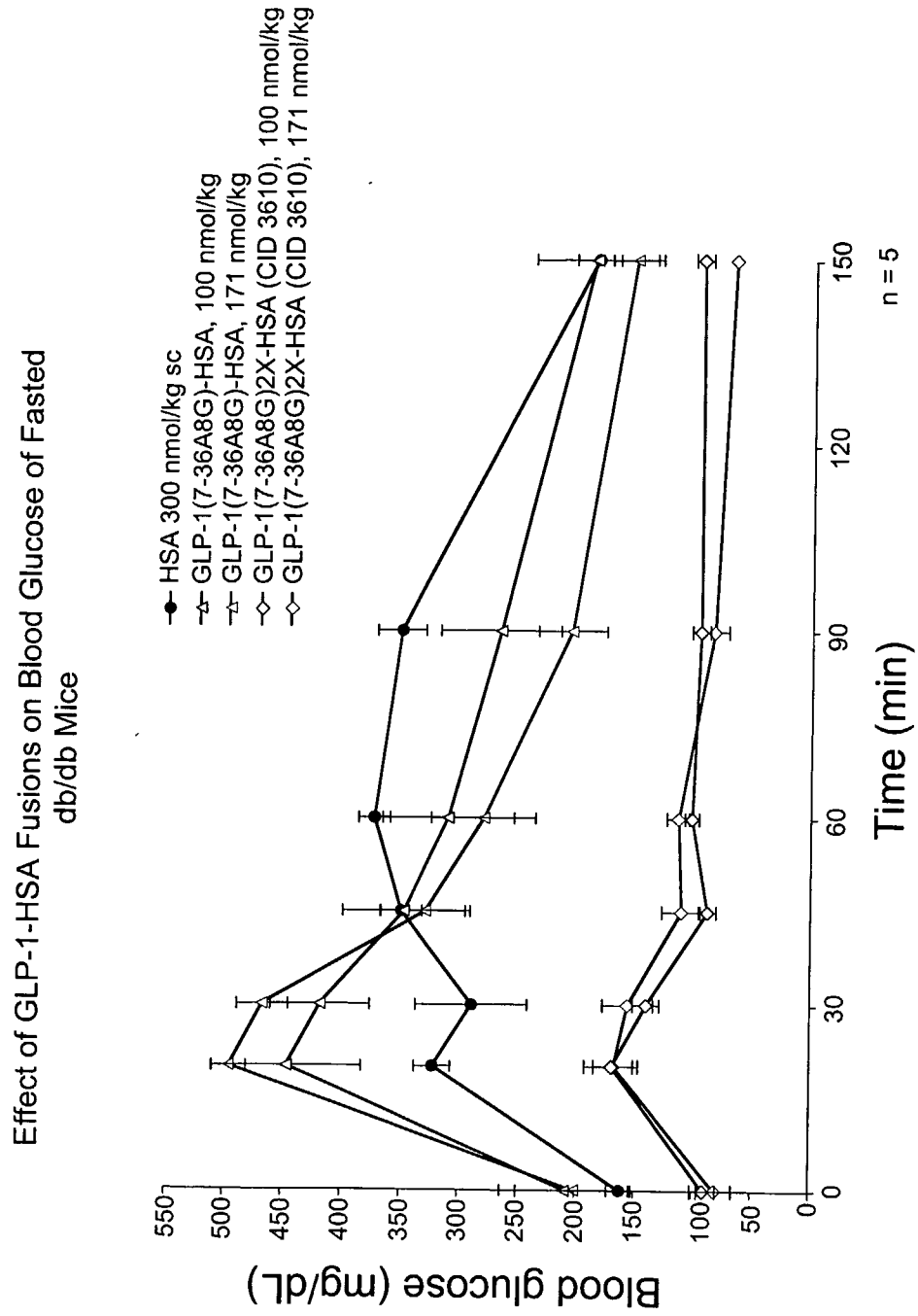

Effect of GLP-1-HSA Fusions on Blood Glucose of Fasted db/db Mice
HSA 300 nmol/kg sc
GLP-1(7-36A8G)-HSA, 100 nmol/kg
GLP-1(7-36A8G)-HSA, 171 nmol/kg
GLP-1(7-36A8G)2X-HSA (CID 3610), 100 nmol/kg
GLP-1(7-36A8G)2X-HSA (CID 3610), 171 nmol/kg
Blood glucose (mg/dL)
550
500
450
400
350
300
250
200
150
100
50
0
0
30
60
90
120
150
Time (min)
n = 5

Figure 11