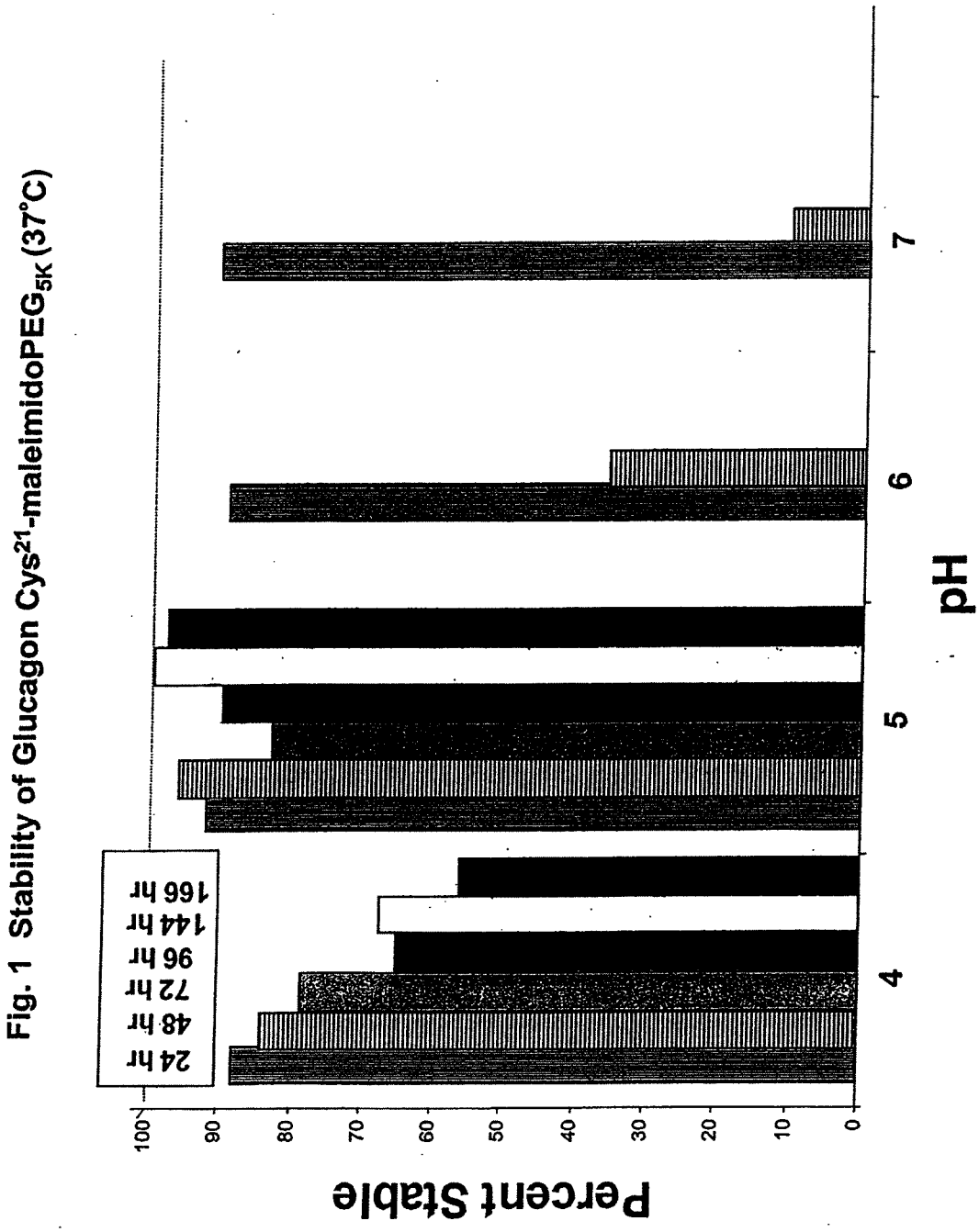


Fig. 1 Stability of Glucagon Cys^{21}-maleimidoPEG$_{5K}$ (37°C)

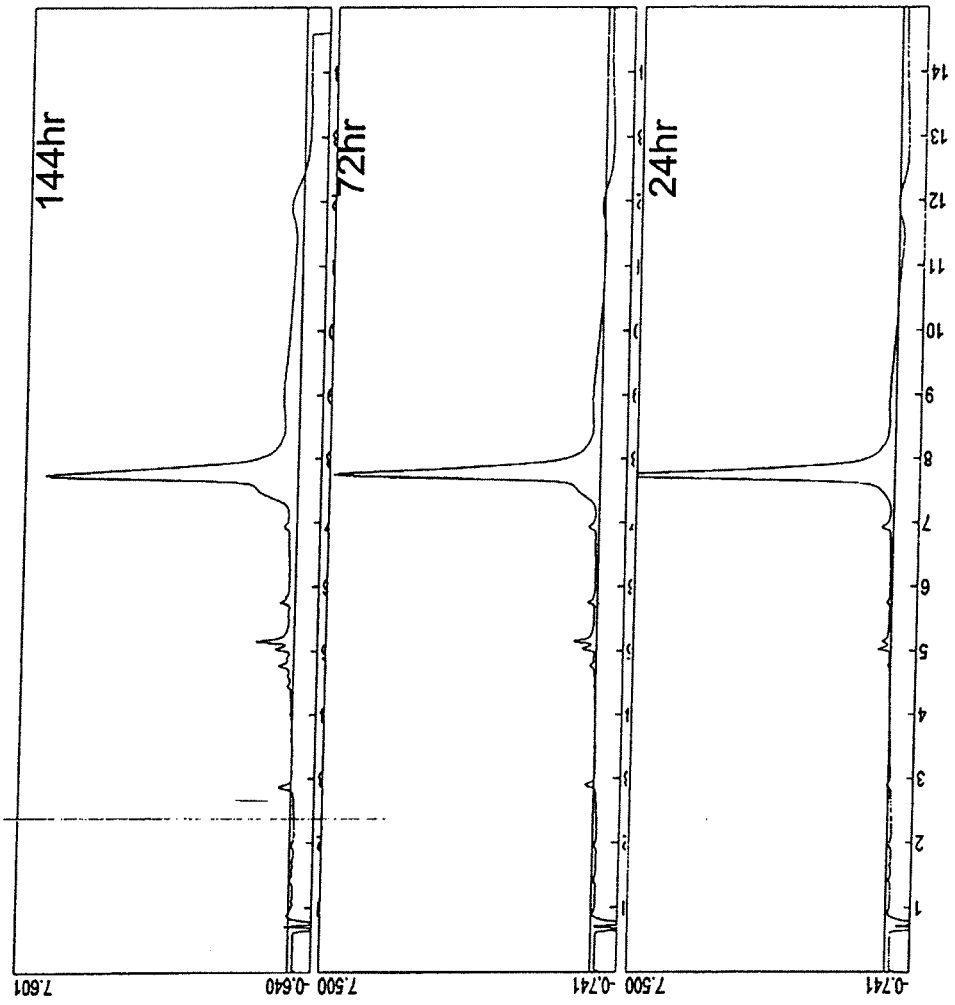


Fig. 2 HPLC Analysis of Glucagon Cys^{21}-maleimidoPEG$_{5K}$ at pH 5 (37°C)

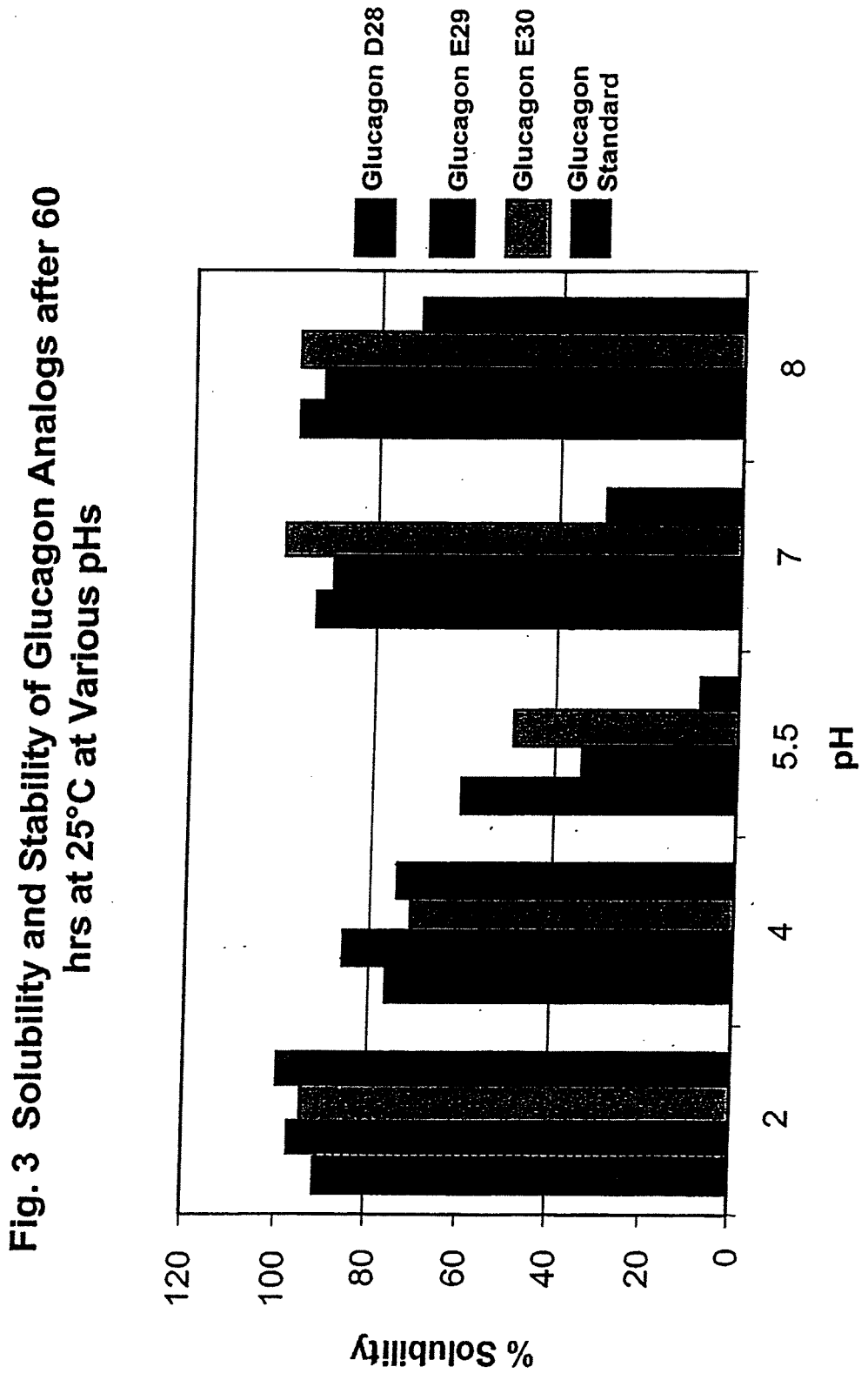
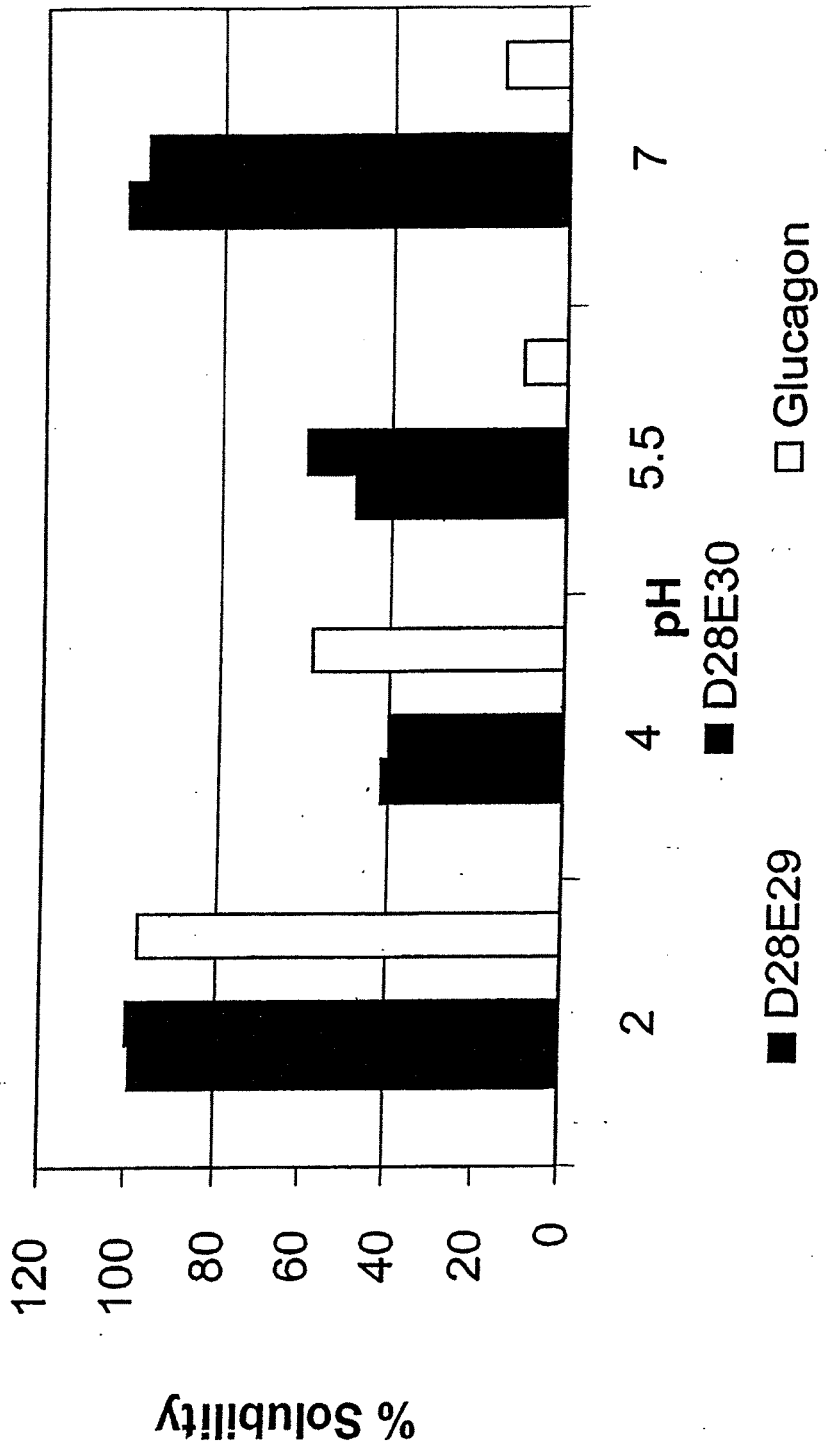


Fig. 3 Solubility and Stability of Glucagon Analogs after 60 hrs at 25°C at Various pHs

Fig. 4 Solubility of Anionic Glucagon Analogs
(24hrs at 25C and 24hrs at 4C)



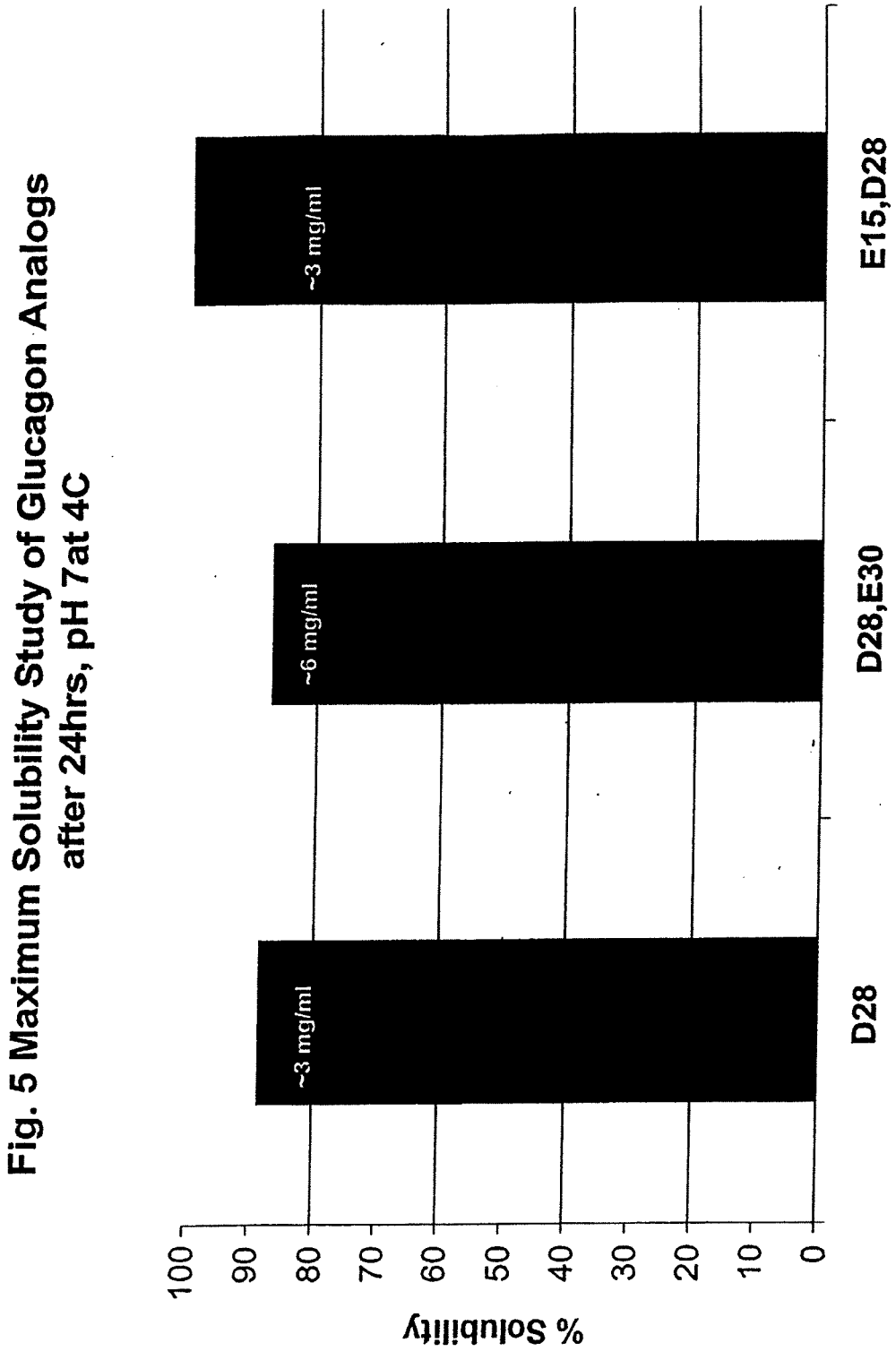
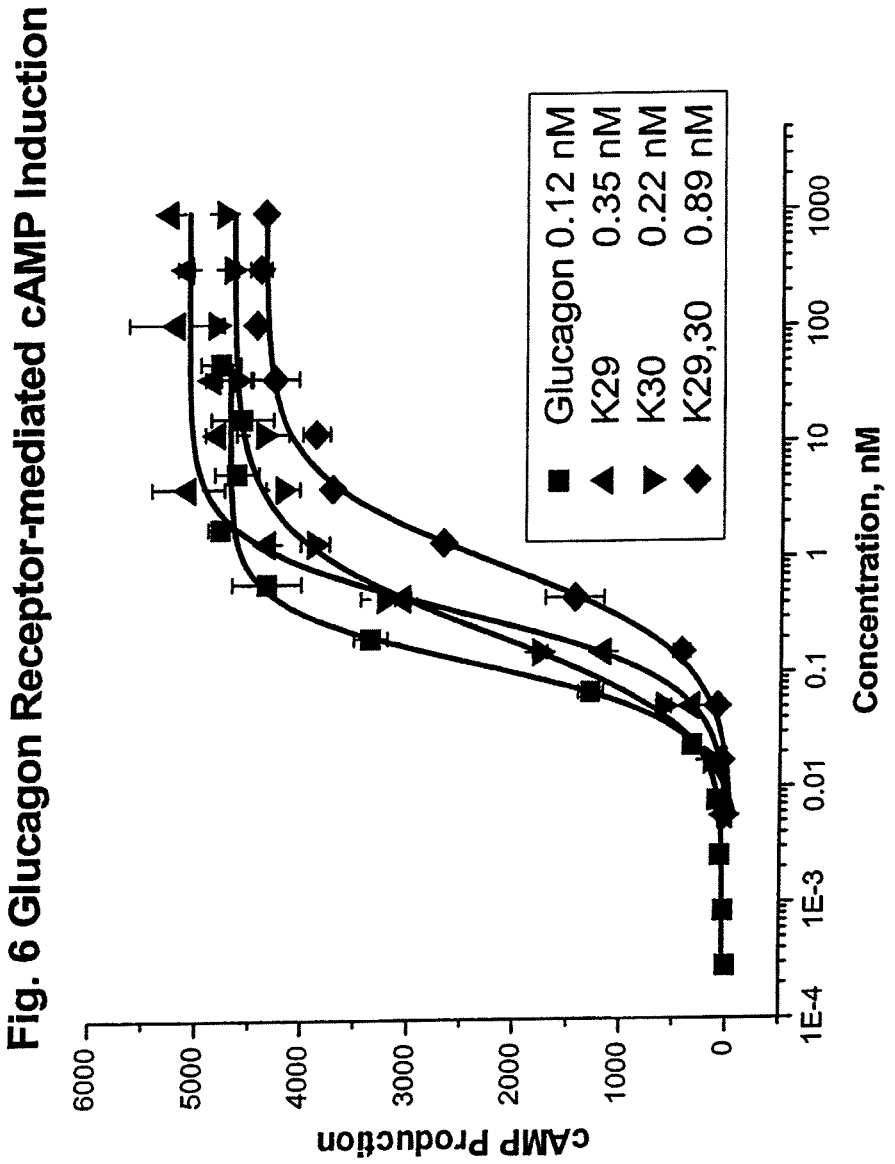
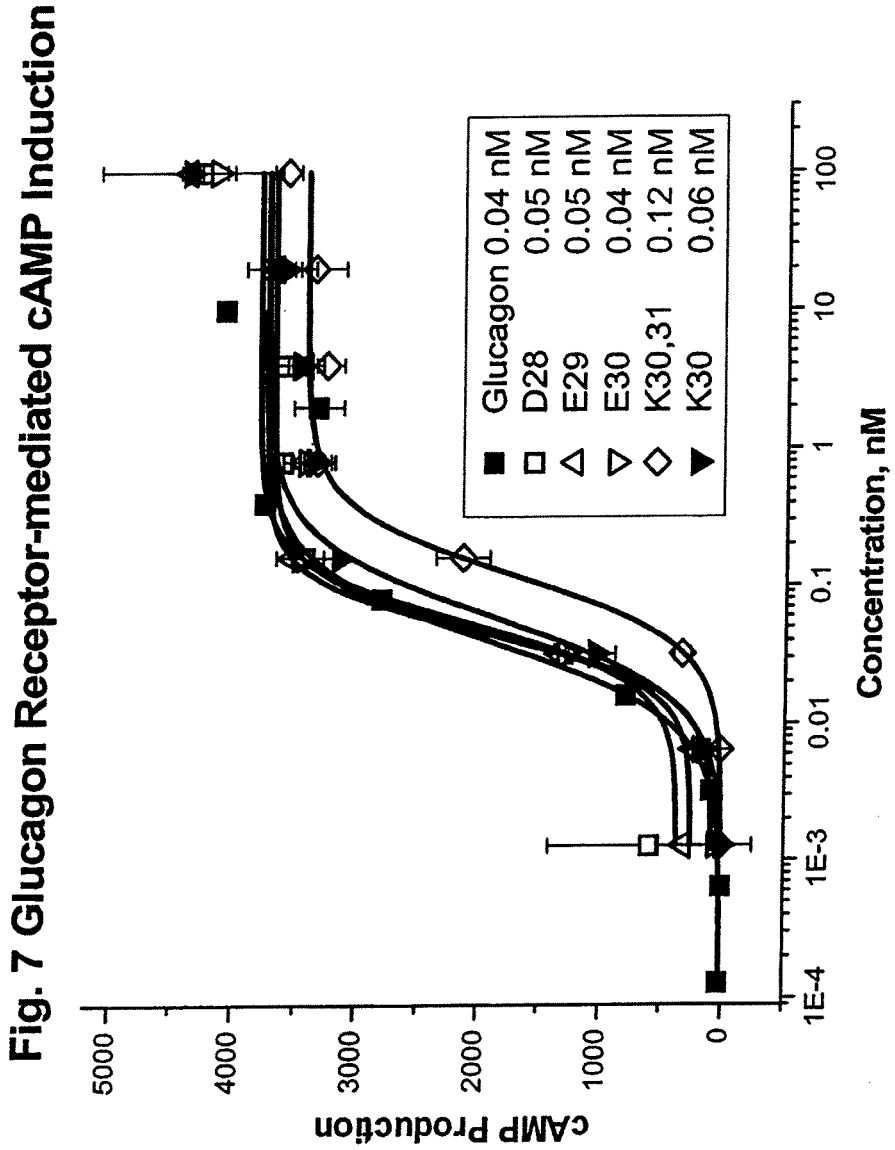
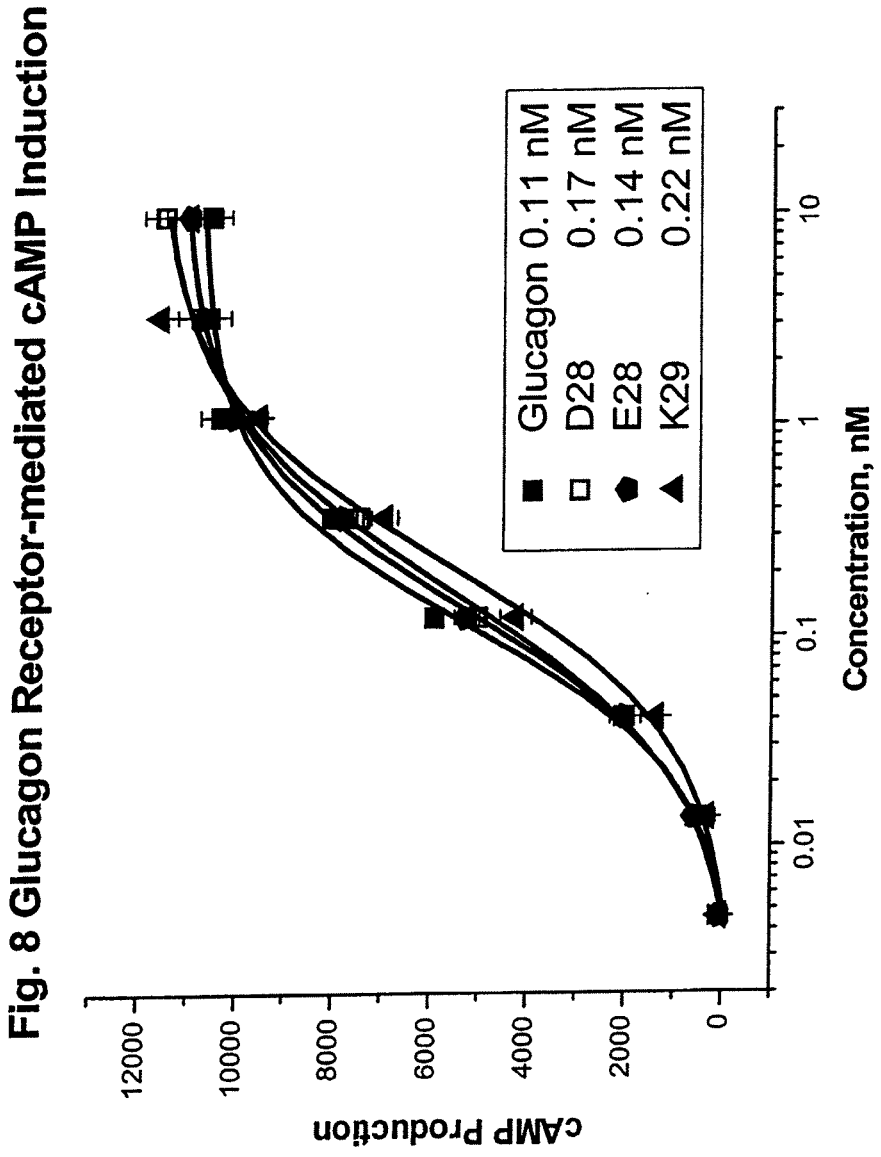
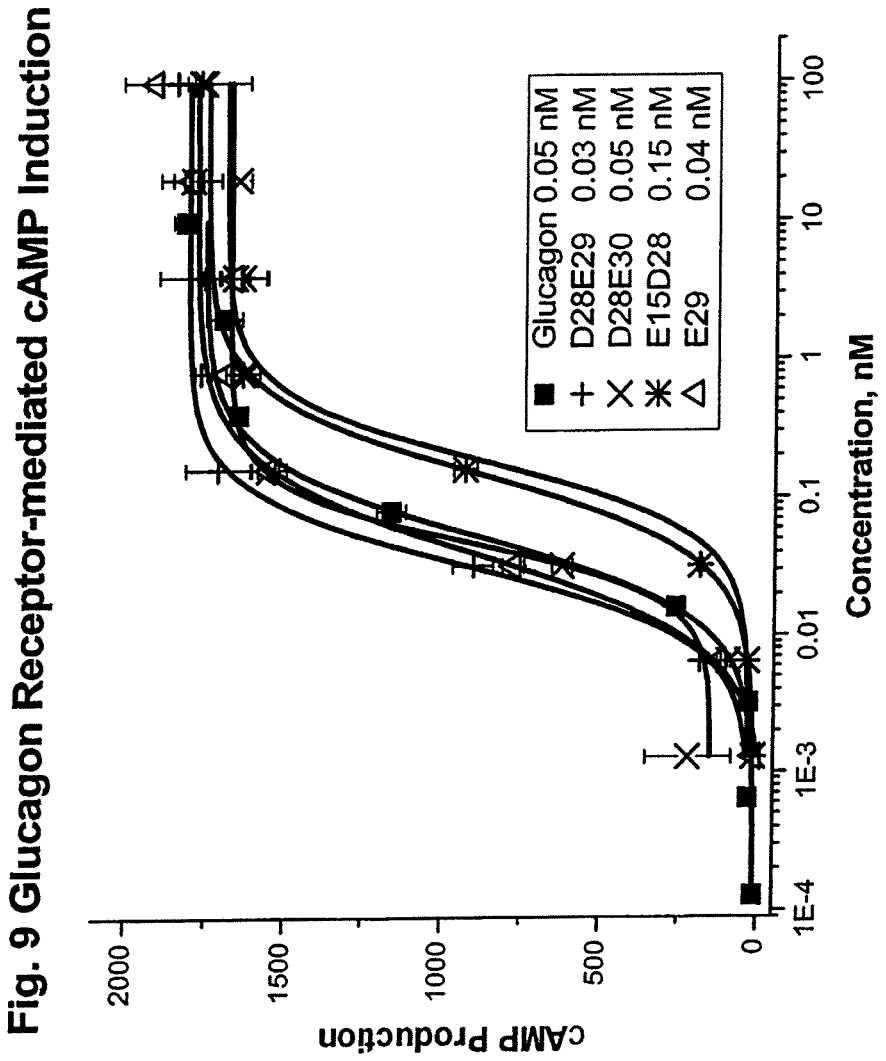


Fig. 5 Maximum Solubility Study of Glucagon Analogs after 24hrs, pH 7at 4C


Fig. 6 Glucagon Receptor-mediated cAMP Induction
cAMP Production
6000
5000
4000
3000
2000
1000
0
1E-4
1E-3
0.01
0.1
1
10
100
1000
Concentration, nM
Glucagon 0.12 nM
K29 0.35 nM
K30 0.22 nM
K29,30 0.89 nM


Fig. 7 Glucagon Receptor-mediated cAMP Induction
cAMP Production
5000
4000
3000
2000
1000
0
1E-4
1E-3
0.01
0.1
1
10
100
Concentration, nM
Glucagon 0.04 nM
D28 0.05 nM
E29 0.05 nM
E30 0.04 nM
K30,31 0.12 nM
K30 0.06 nM


Fig. 8 Glucagon Receptor-mediated cAMP Induction
cAMP Production
12000
10000
8000
6000
4000
2000
0
0.01
0.1
1
10
Concentration, nM
Glucagon 0.11 nM
D28 0.17 nM
E28 0.14 nM
K29 0.22 nM


Fig. 9 Glucagon Receptor-mediated cAMP Induction
cAMP Production
2000
1500
1000
500
0
1E-4
1E-3
0.01
0.1
1
10
100
Concentration, nM
Glucagon 0.05 nM
D28E29 0.03 nM
D28E30 0.05 nM
E15D28 0.15 nM
E29 0.04 nM

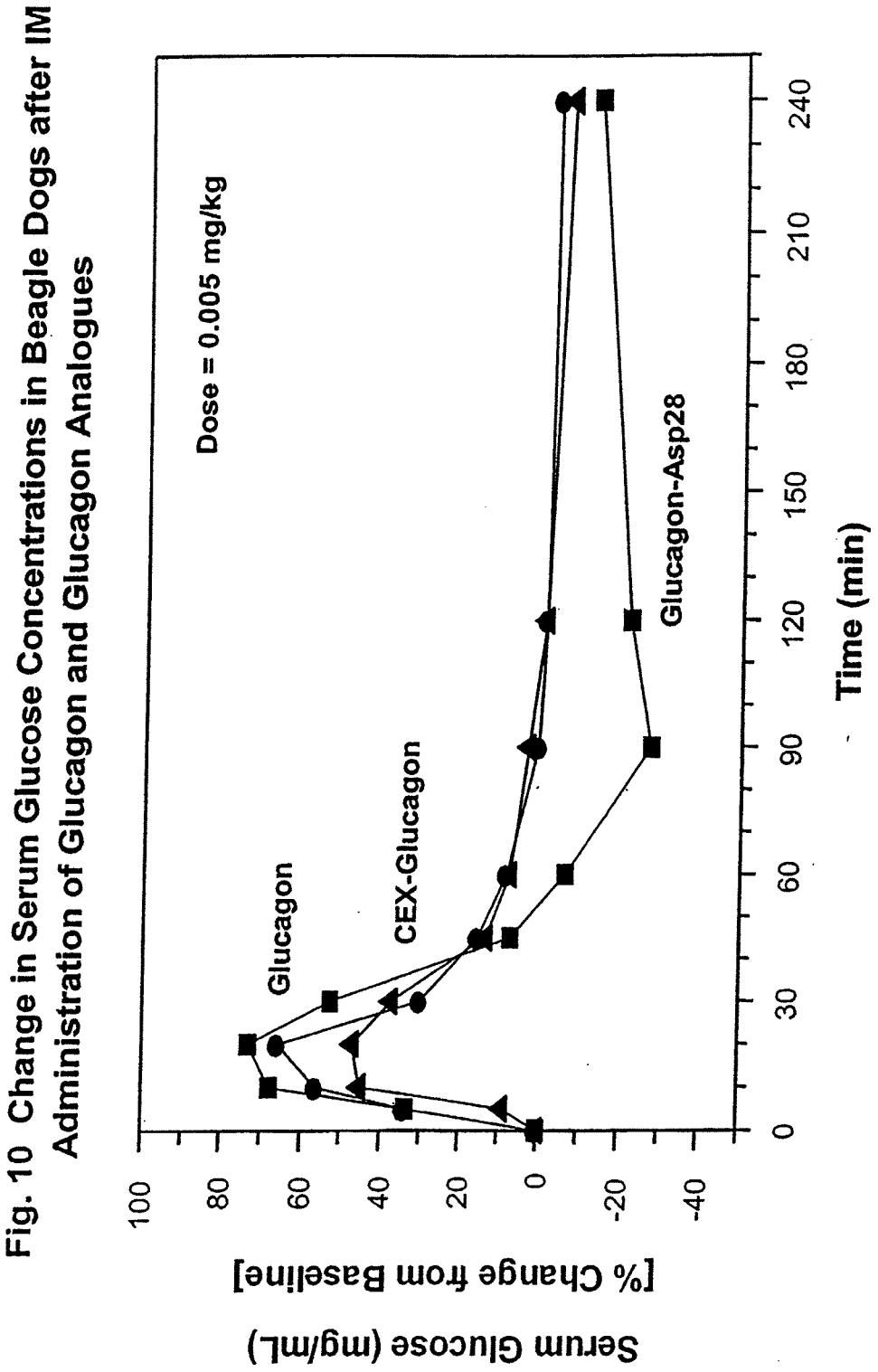
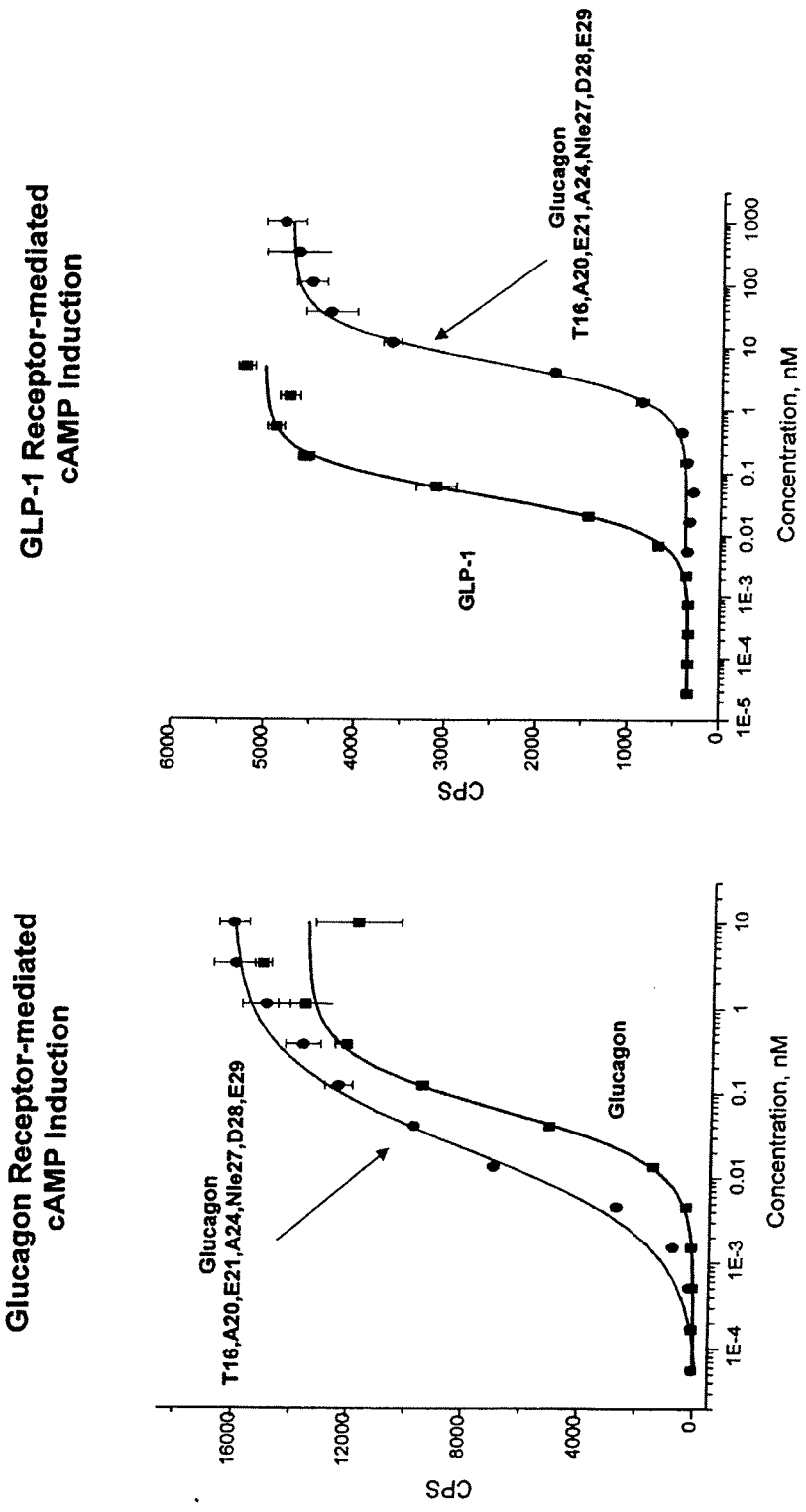


Fig. 10 Change in Serum Glucose Concentrations in Beagle Dogs after IM Administration of Glucagon and Glucagon Analogues

Figures 11A-11B



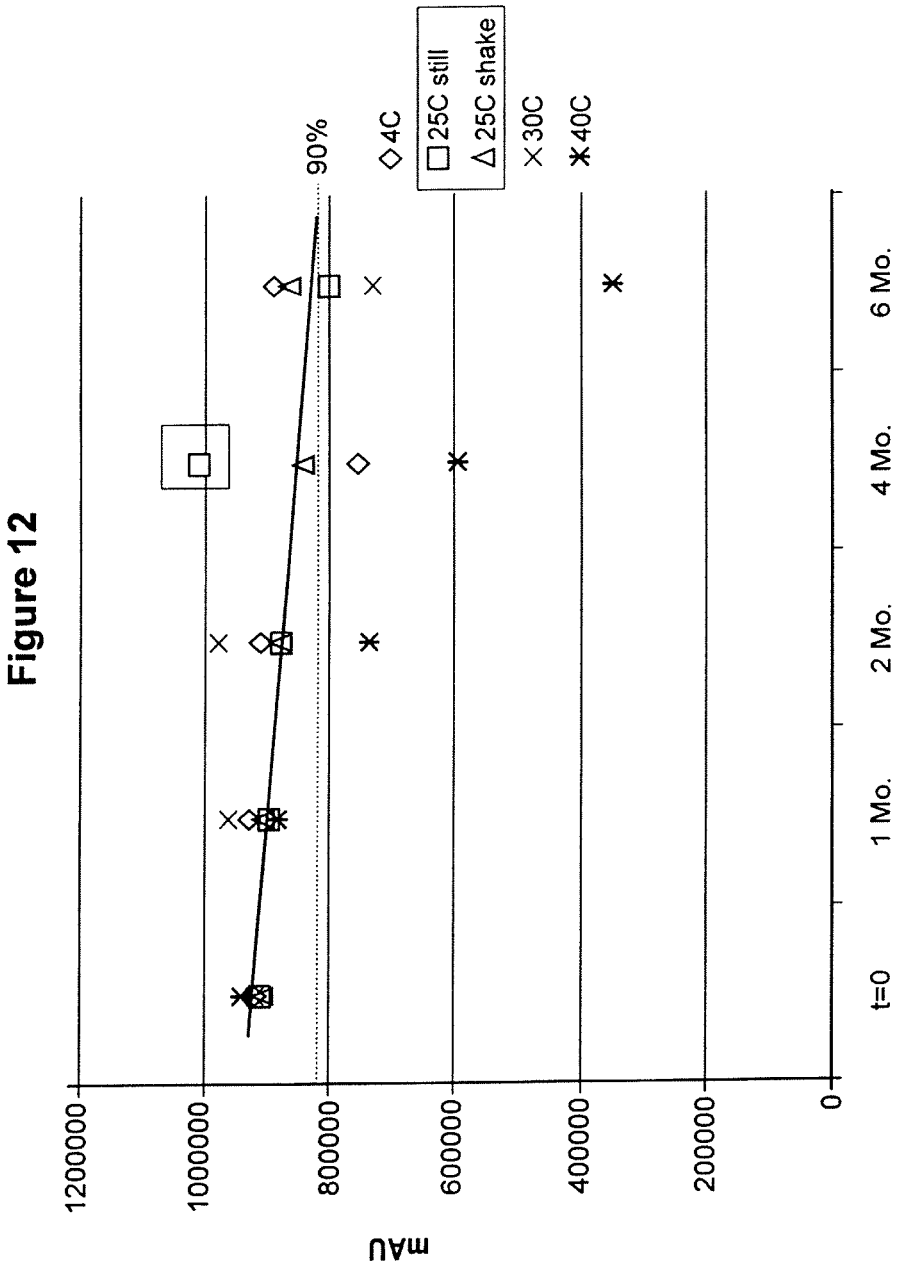

mAU
1200000
1000000
800000
600000
400000
200000
0
t=0
1 Mo.
2 Mo.
4 Mo.
6 Mo.
90%
4C
25C still
25C shake
30C
40C

Figure 12

Figure 13

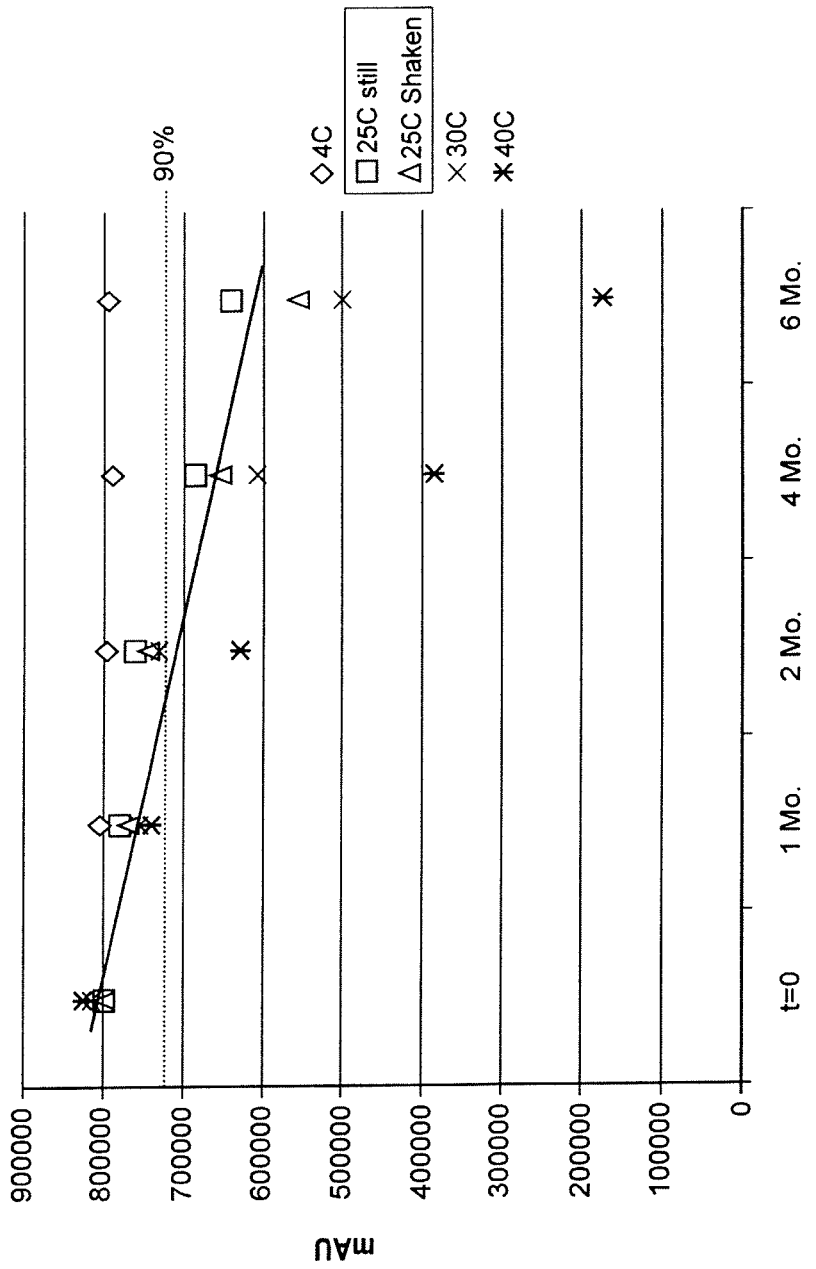

mAU
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
t=0
1 Mo.
2 Mo.
4 Mo.
6 Mo.
90%
4C
25C still
25C Shaken
30C
40C

Figure 14

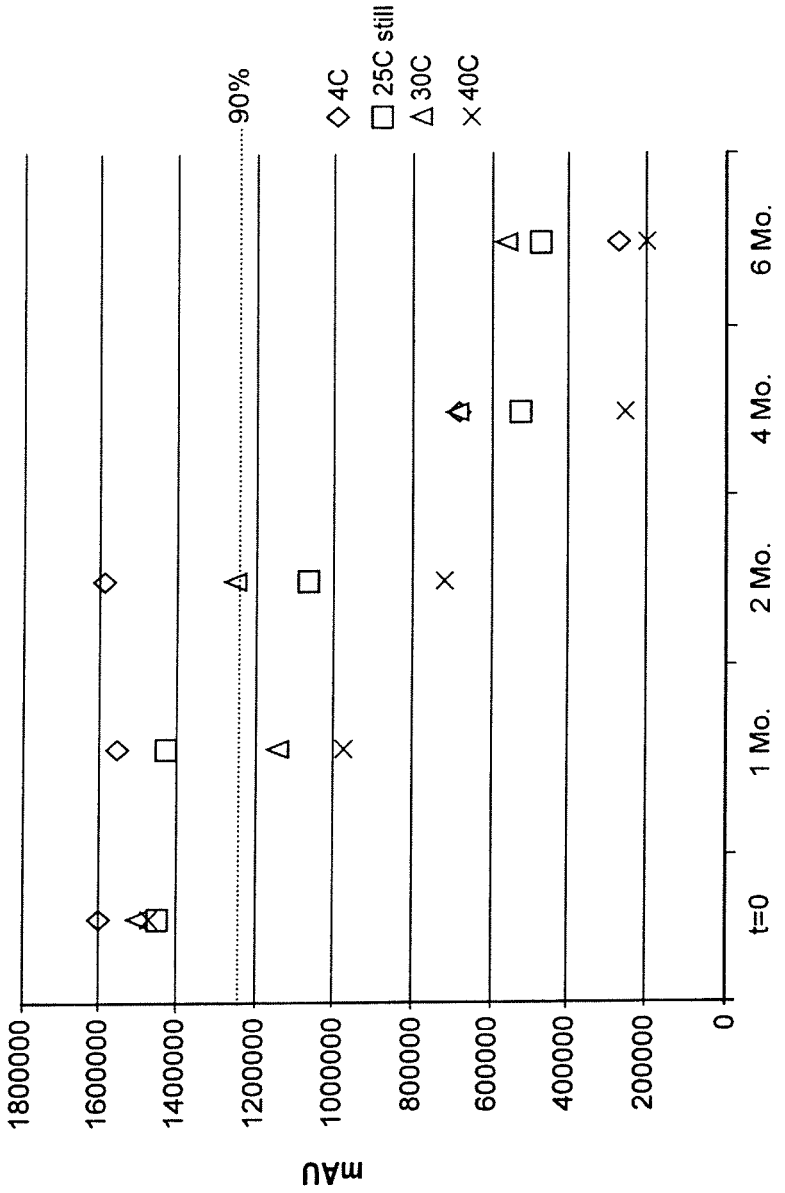

mAU
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
t=0
1 Mo.
2 Mo.
4 Mo.
6 Mo.
90%
4C
25C still
30C
40C

FIGURE 15

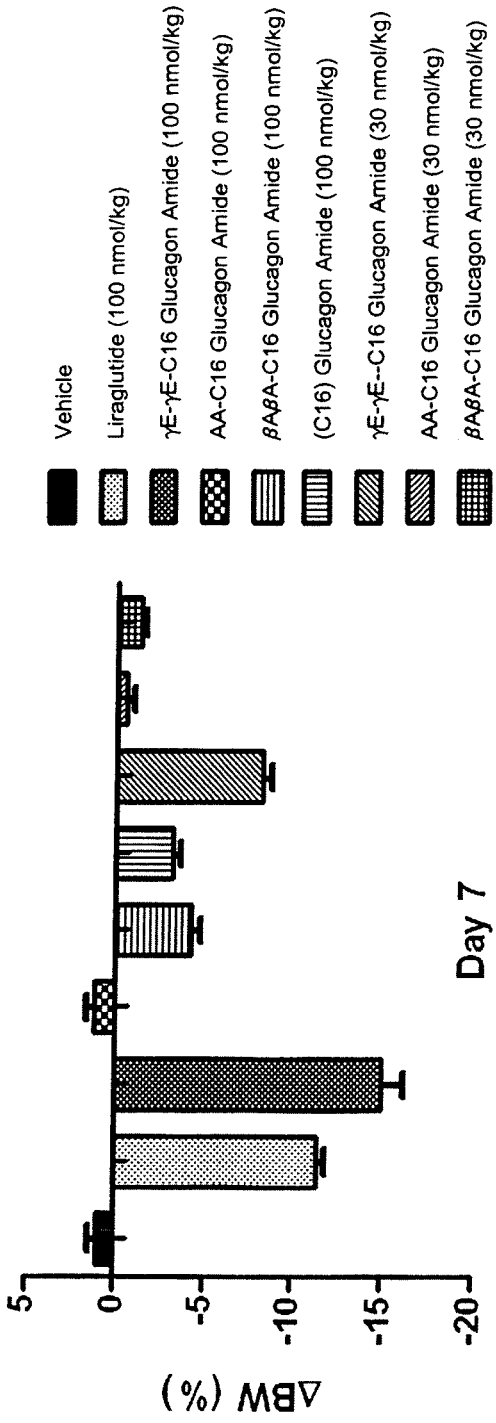

Vehicle
Liraglutide (100 nmol/kg)
γE-γE-C16 Glucagon Amide (100 nmol/kg)
AA-C16 Glucagon Amide (100 nmol/kg)
βAβA-C16 Glucagon Amide (100 nmol/kg)
(C16) Glucagon Amide (100 nmol/kg)
γE-γE--C16 Glucagon Amide (30 nmol/kg)
AA-C16 Glucagon Amide (30 nmol/kg)
βAβA-C16 Glucagon Amide (30 nmol/kg)
5
0
-5
-10
-15
-20
ΔBW (%)
Day 7

FIGURE 16

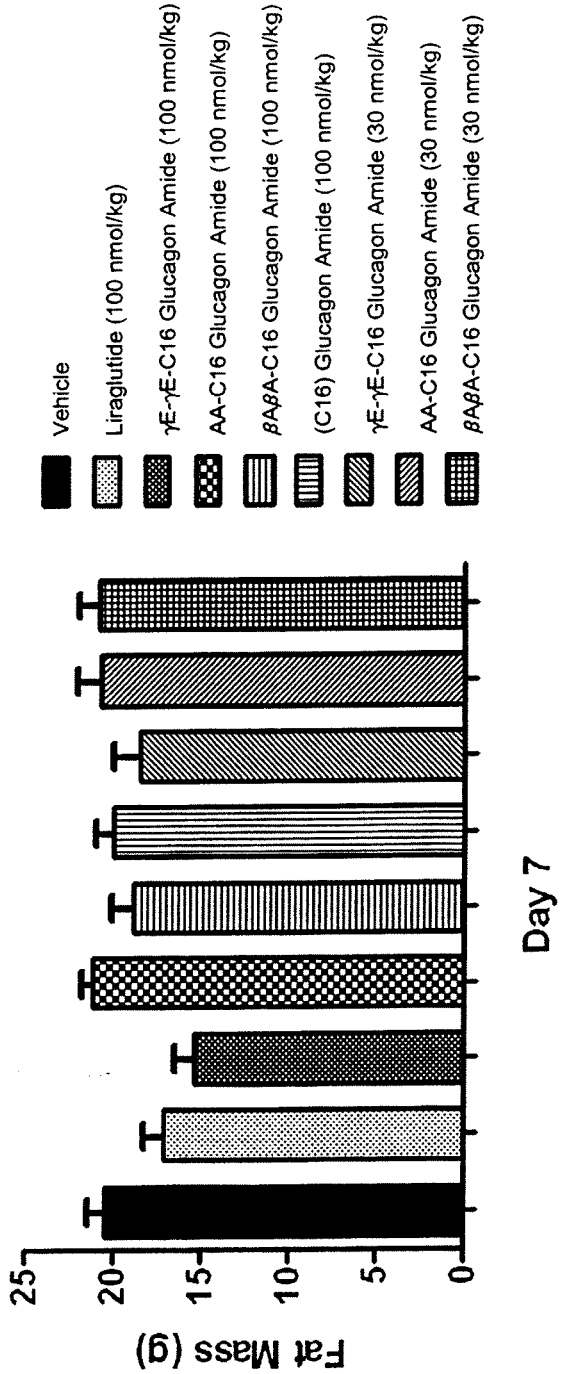
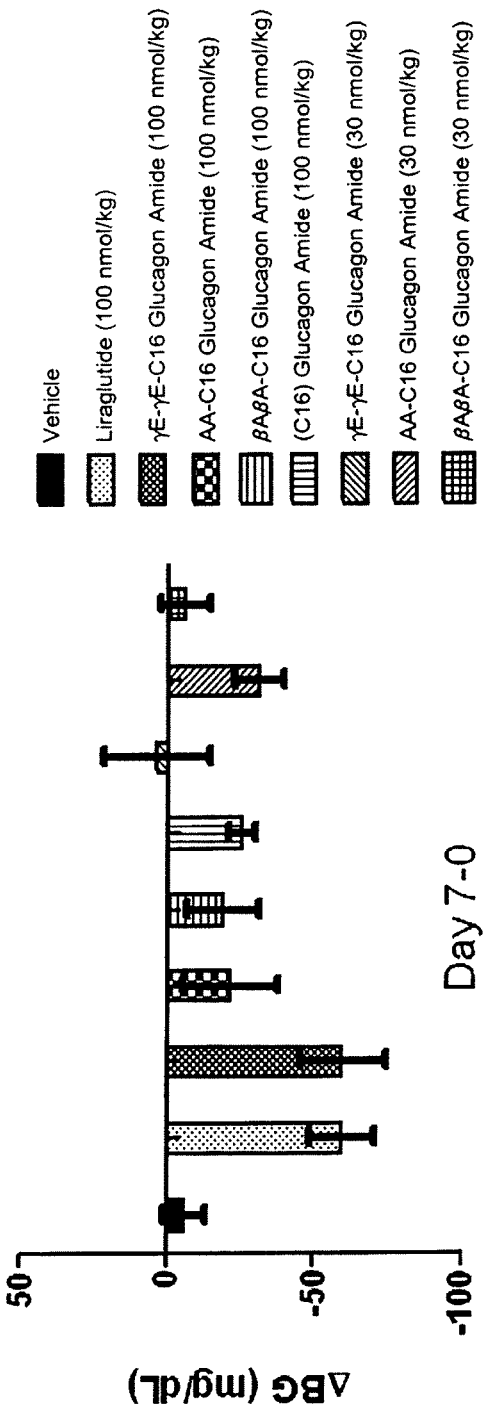

Vehicle
Liraglutide (100 nmol/kg)
γE-γE-C16 Glucagon Amide (100 nmol/kg)
AA-C16 Glucagon Amide (100 nmol/kg)
βAβA-C16 Glucagon Amide (100 nmol/kg)
(C16) Glucagon Amide (100 nmol/kg)
γE-γE-C16 Glucagon Amide (30 nmol/kg)
AA-C16 Glucagon Amide (30 nmol/kg)
βAβA-C16 Glucagon Amide (30 nmol/kg)
Fat Mass (g)
25
20
15
10
5
0
Day 7

FIGURE 17


Vehicle
Liraglutide (100 nmol/kg)
γE-γE-C16 Glucagon Amide (100 nmol/kg)
AA-C16 Glucagon Amide (100 nmol/kg)
βAβA-C16 Glucagon Amide (100 nmol/kg)
(C16) Glucagon Amide (100 nmol/kg)
γE-γE-C16 Glucagon Amide (30 nmol/kg)
AA-C16 Glucagon Amide (30 nmol/kg)
βAβA-C16 Glucagon Amide (30 nmol/kg)
ΔBG (mg/dL)
50
0
-50
-100
Day 7-0