Figure 1

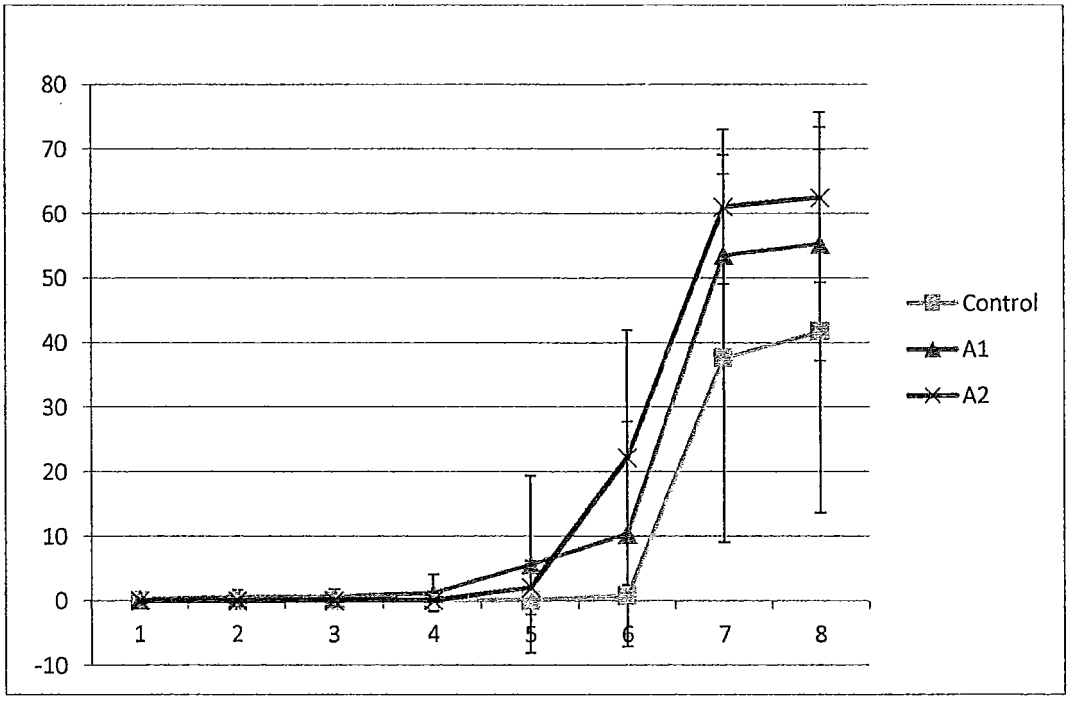


Figure 2

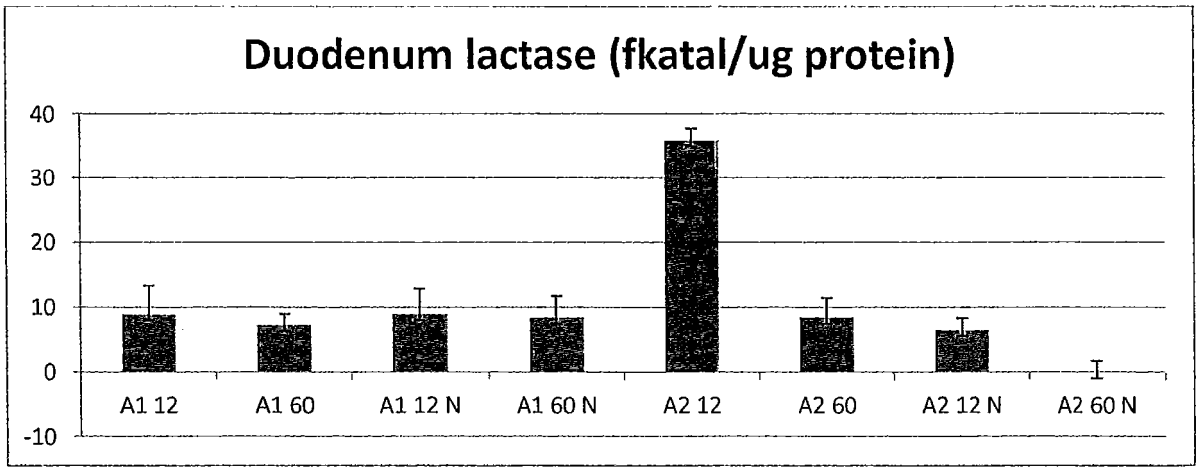


Figure 3

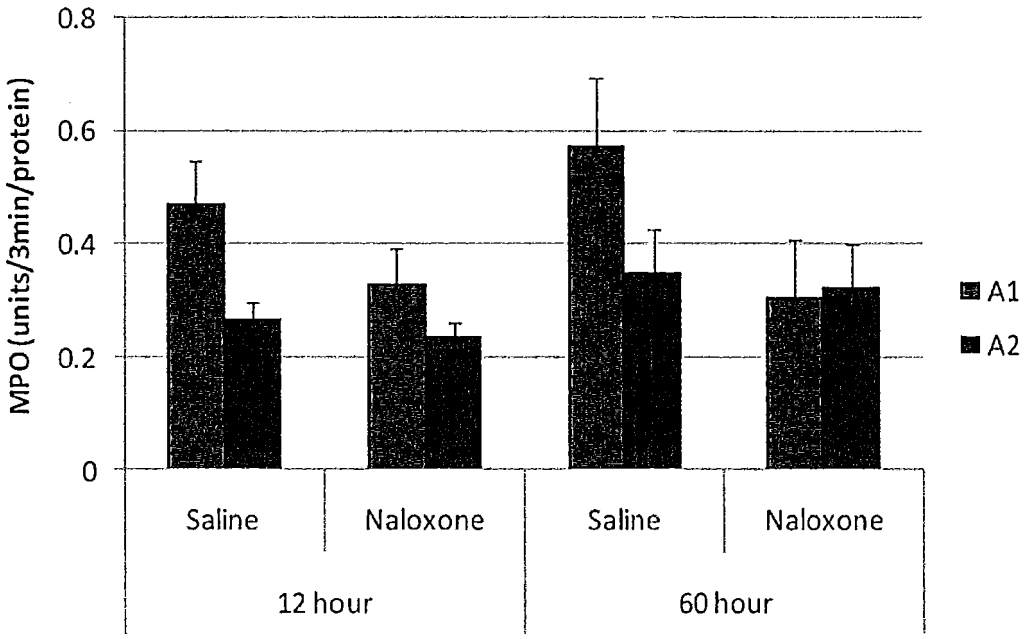

0.8
0.6
0.4
0.2
0
MPO (units/3min/protein)
Saline
Naloxone
Saline
Naloxone
12 hour
60 hour
A1
A2

Figure 4

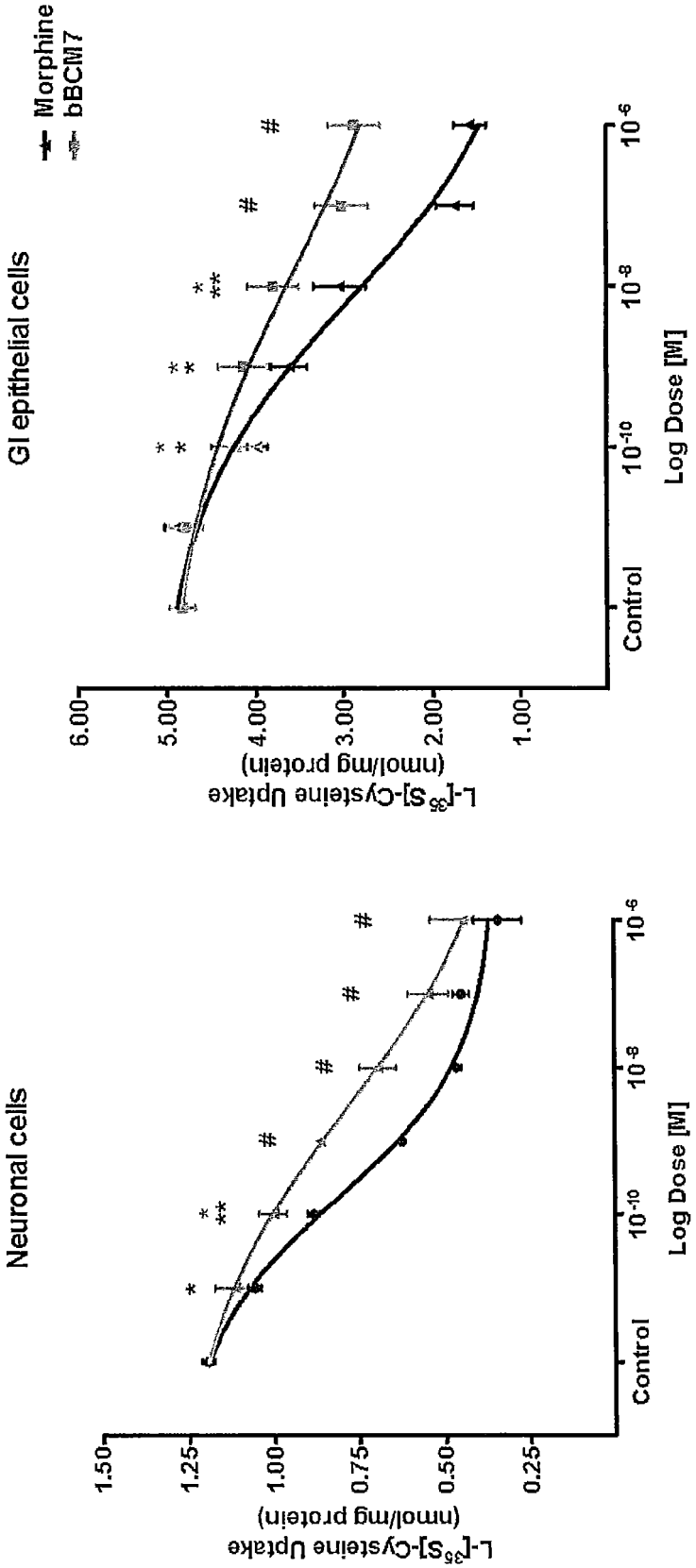

GI epithelial cells
Morphine
bBCM7
L-[35S]-Cysteine Uptake (nmol/mg protein)
6.00
5.00
4.00
3.00
2.00
1.00
Control
10-10
10-8
10-6
Log Dose [M]
Neuronal cells
L-[35S]-Cysteine Uptake (nmol/mg protein)
1.50
1.25
1.00
0.75
0.50
0.25
Control
10-10
10-8
10-6
Log Dose [M]

Figure 5

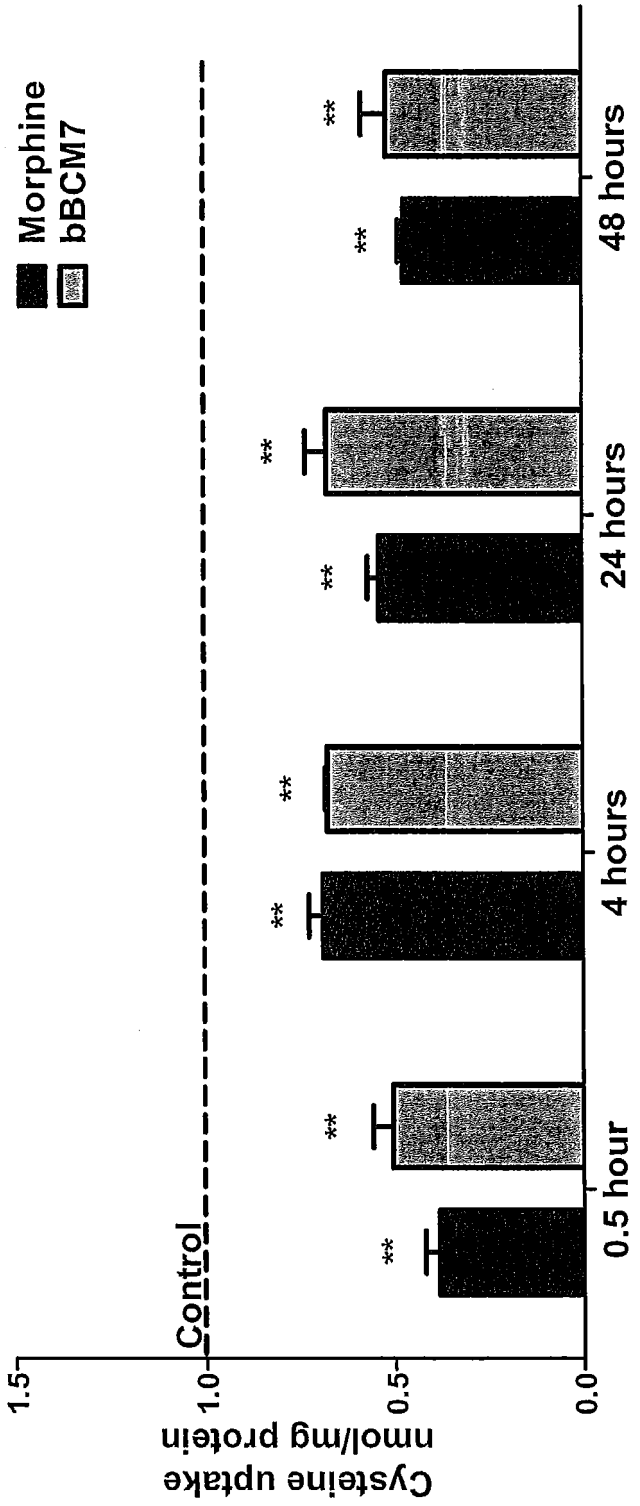

Morphine
bBCM7
Cystine uptake
nmol/mg protein
1.5
1.0
0.5
0.0
Control
0.5 hour
4 hours
24 hours
48 hours
**

Figure 6

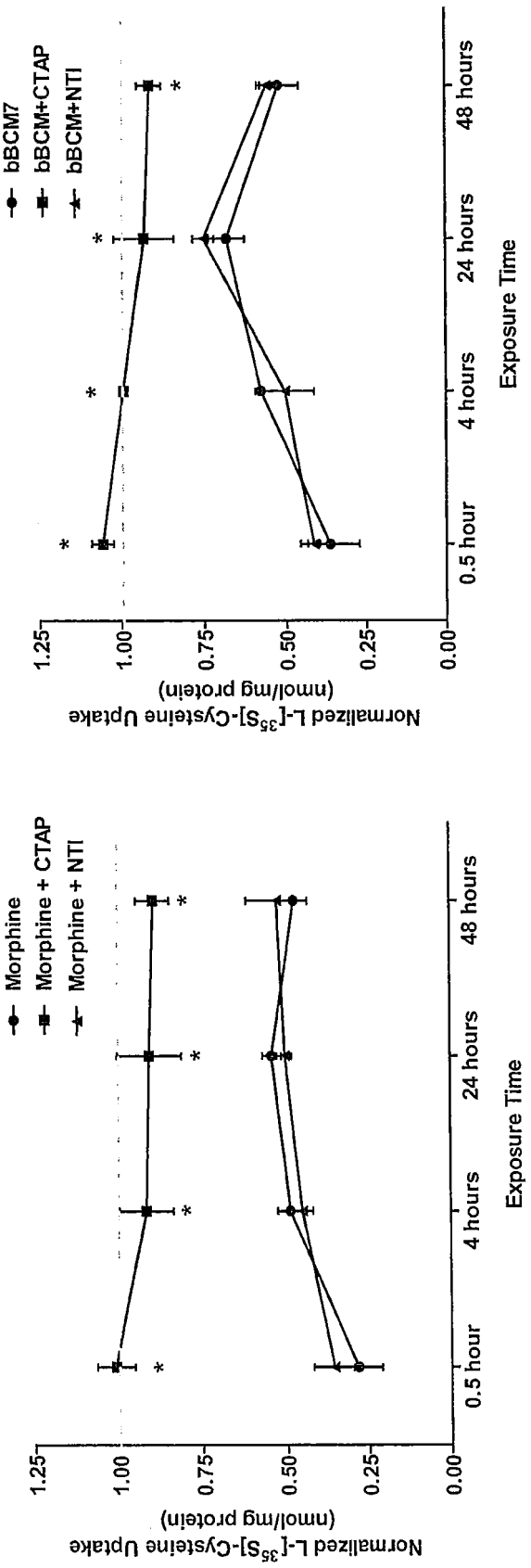

bBCM7
bBCM+CTAP
bBCM+NTI
Normalized L-[35S]-Cysteine Uptake
(nmol/mg protein)
1.25
1.00
0.75
0.50
0.25
0.00
0.5 hour
4 hours
24 hours
48 hours
Exposure Time
Morphine
Morphine + CTAP
Morphine + NTI
Normalized L-[35S]-Cysteine Uptake
(nmol/mg protein)
1.25
1.00
0.75
0.50
0.25
0.00
0.5 hour
4 hours
24 hours
48 hours
Exposure Time

Figure 7

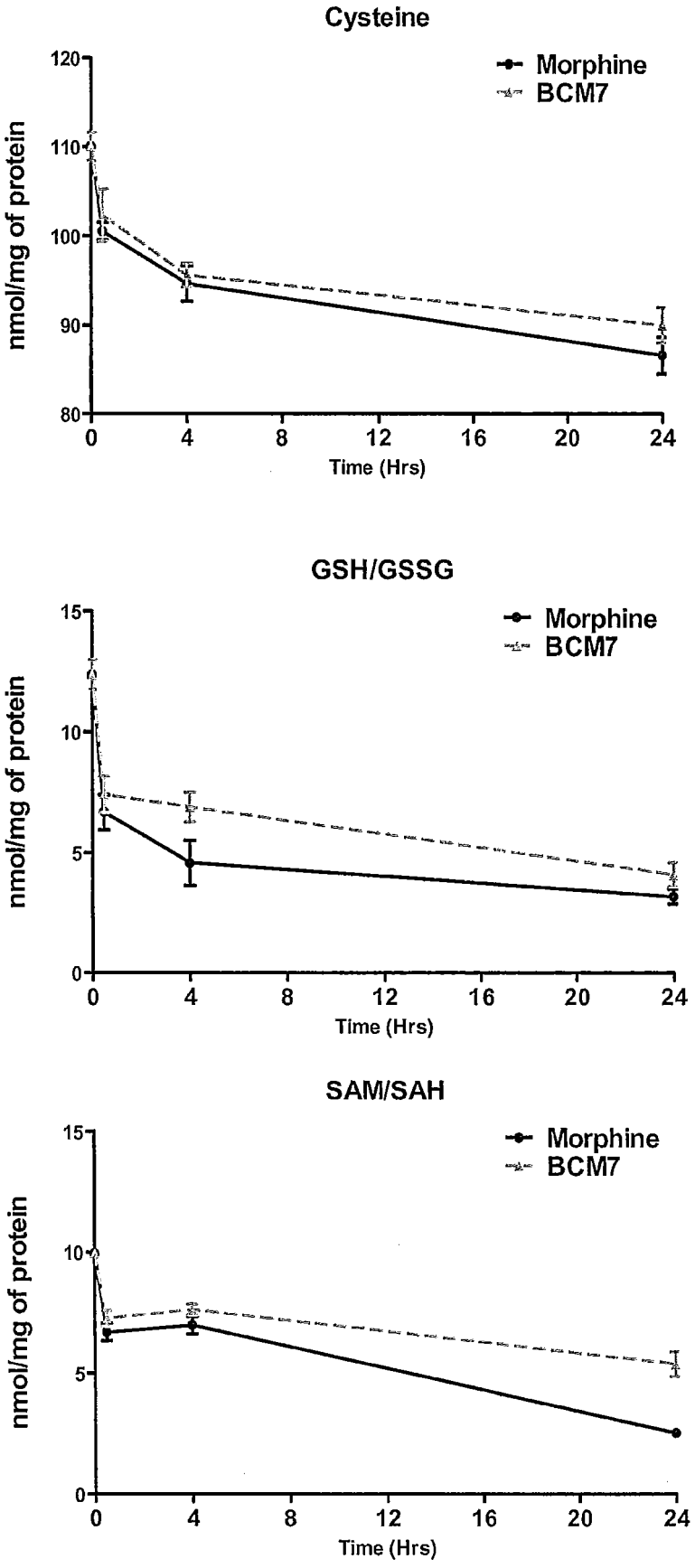

Cysteine
Morphine
BCM7
nmol/mg of protein
120
110
100
90
80
0
4
8
12
16
20
24
Time (Hrs)
GSH/GSSG
Morphine
BCM7
nmol/mg of protein
15
10
5
0
0
4
8
12
16
20
24
Time (Hrs)
SAM/SAH
Morphine
BCM7
nmol/mg of protein
15
10
5
0
0
4
8
12
16
20
24
Time (Hrs)

Figure 8

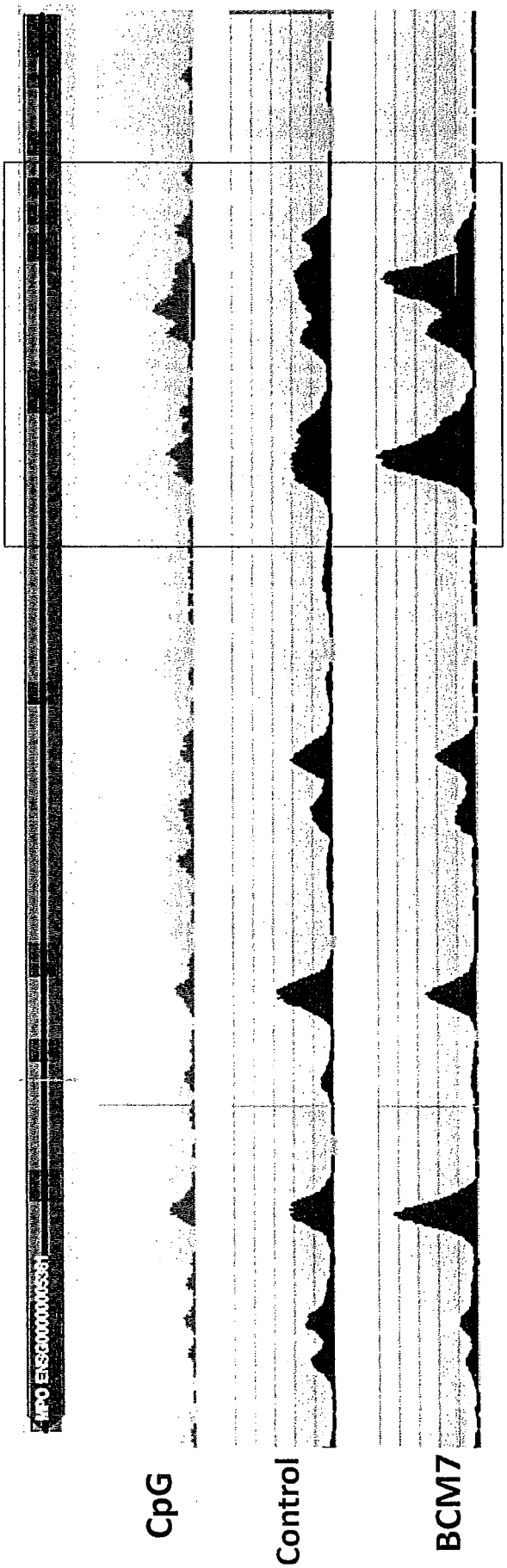


Figure 9

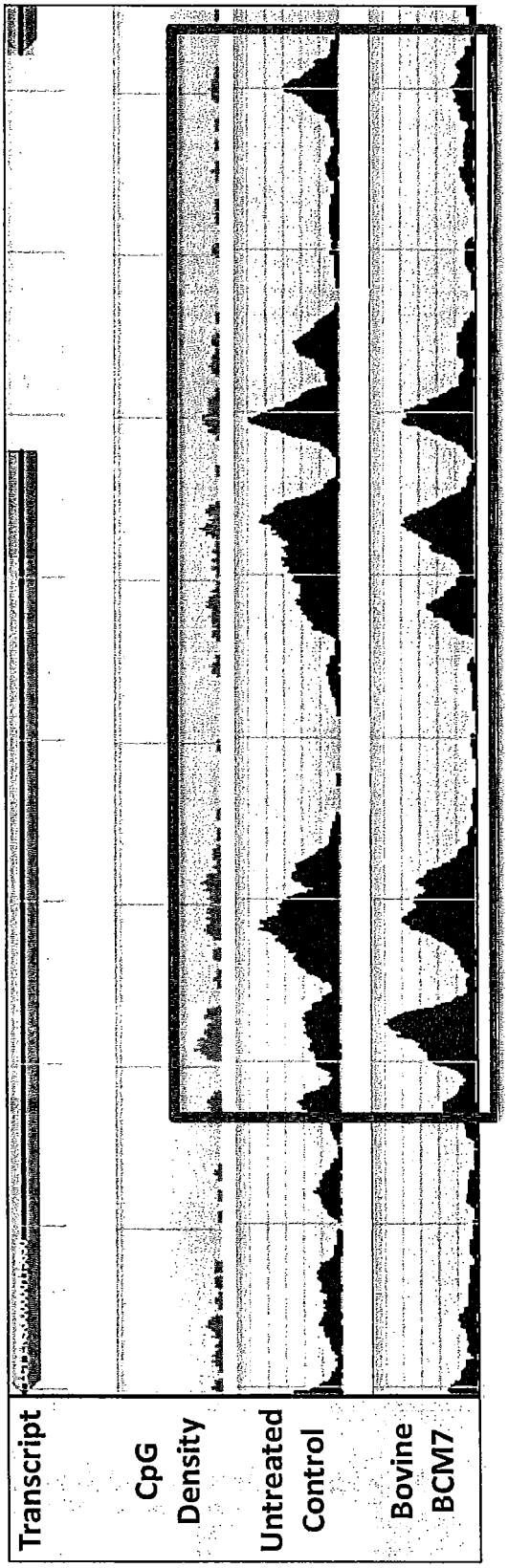
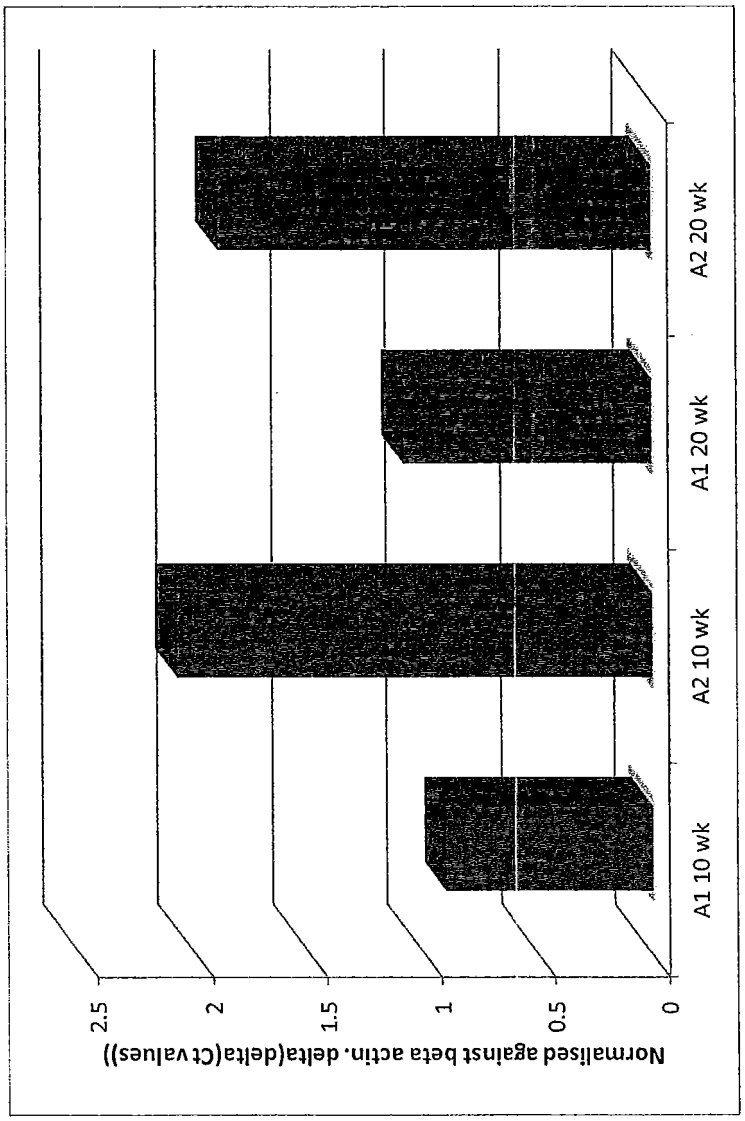


Figure 10


Normalised against beta actin. delta(delta(Ct values))
2.5
2
1.5
1
0.5
0
A1 10 wk
A2 10 wk
A1 20 wk
A2 20 wk