Fig. 1a

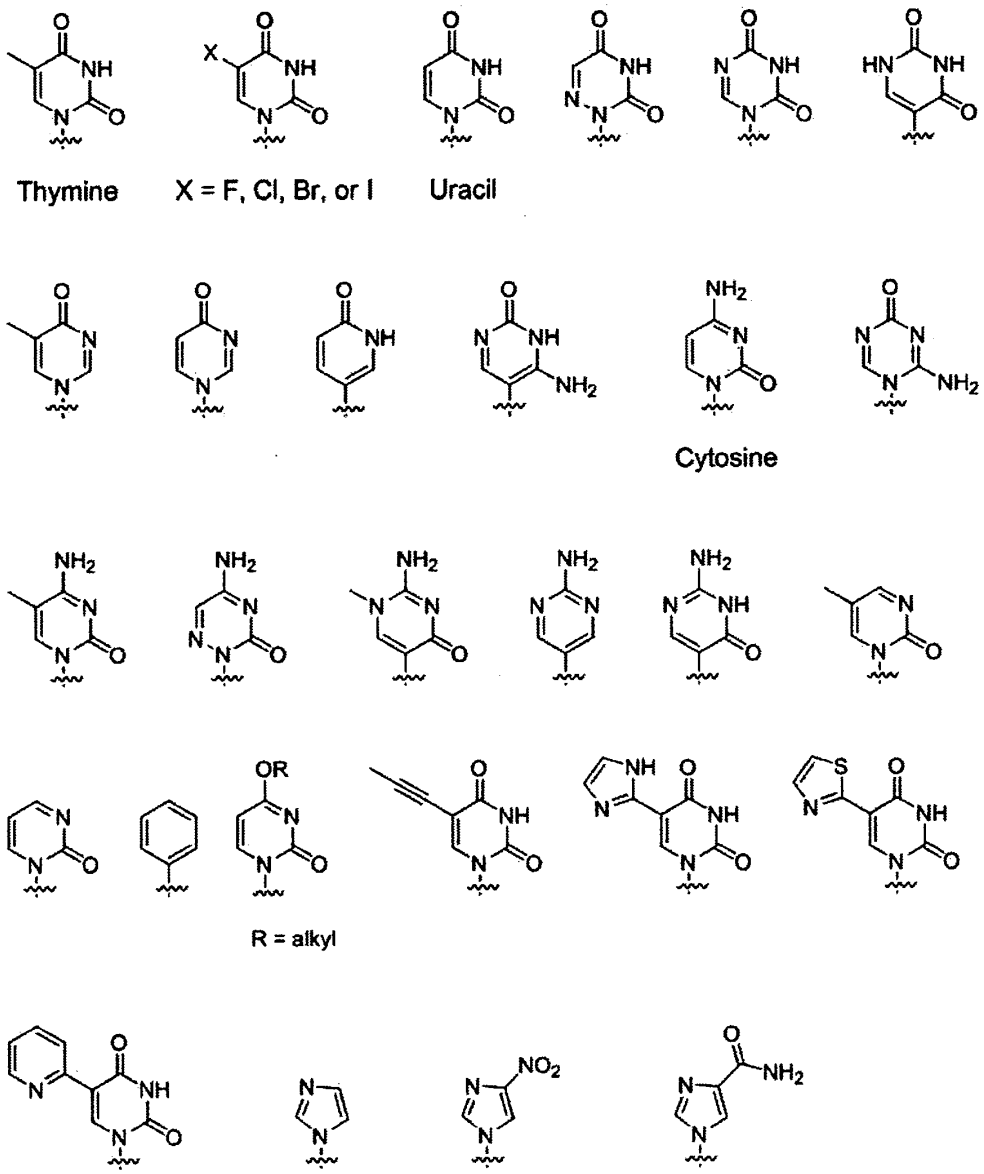


Fig. 1b

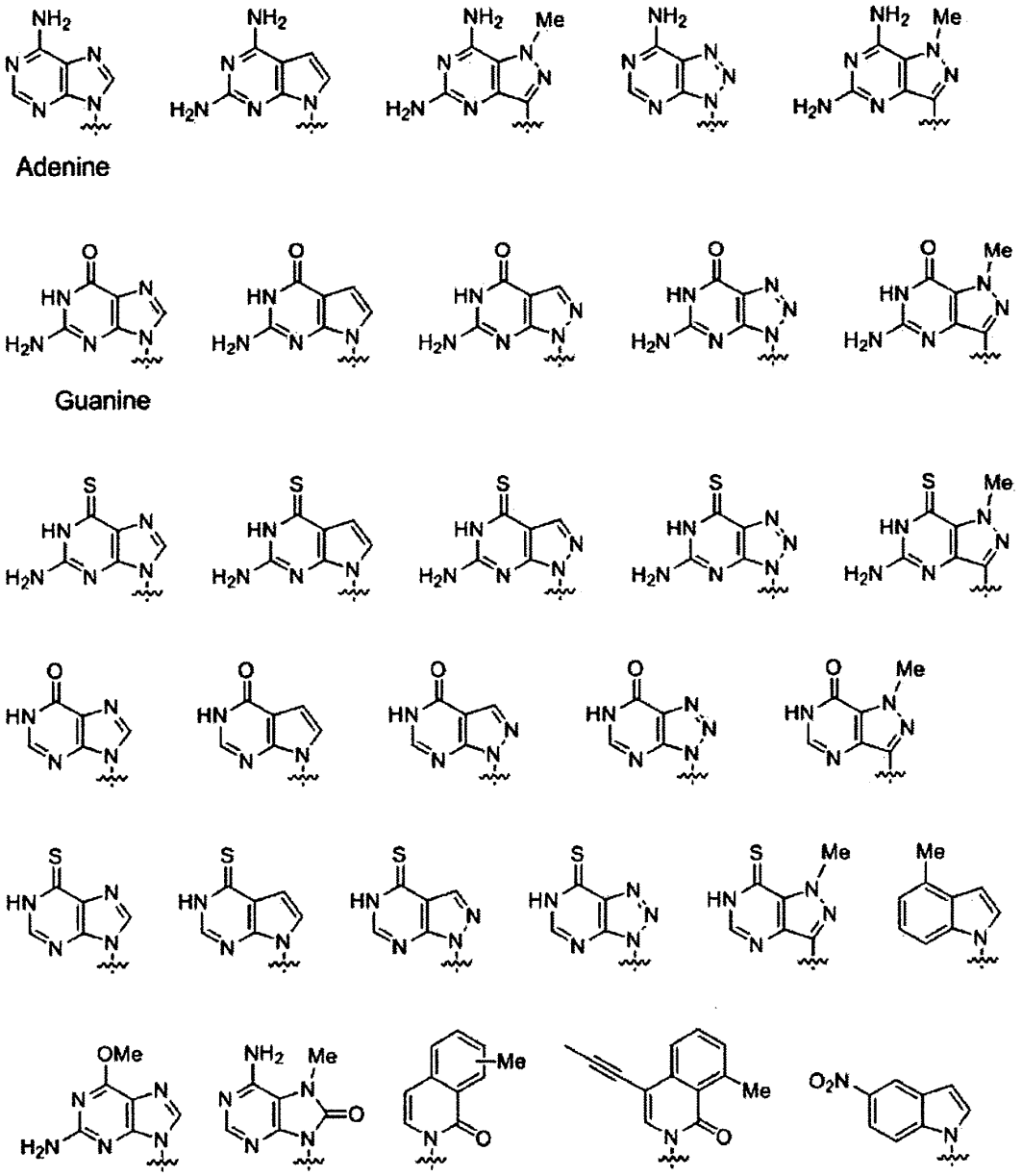


Fig. 1c

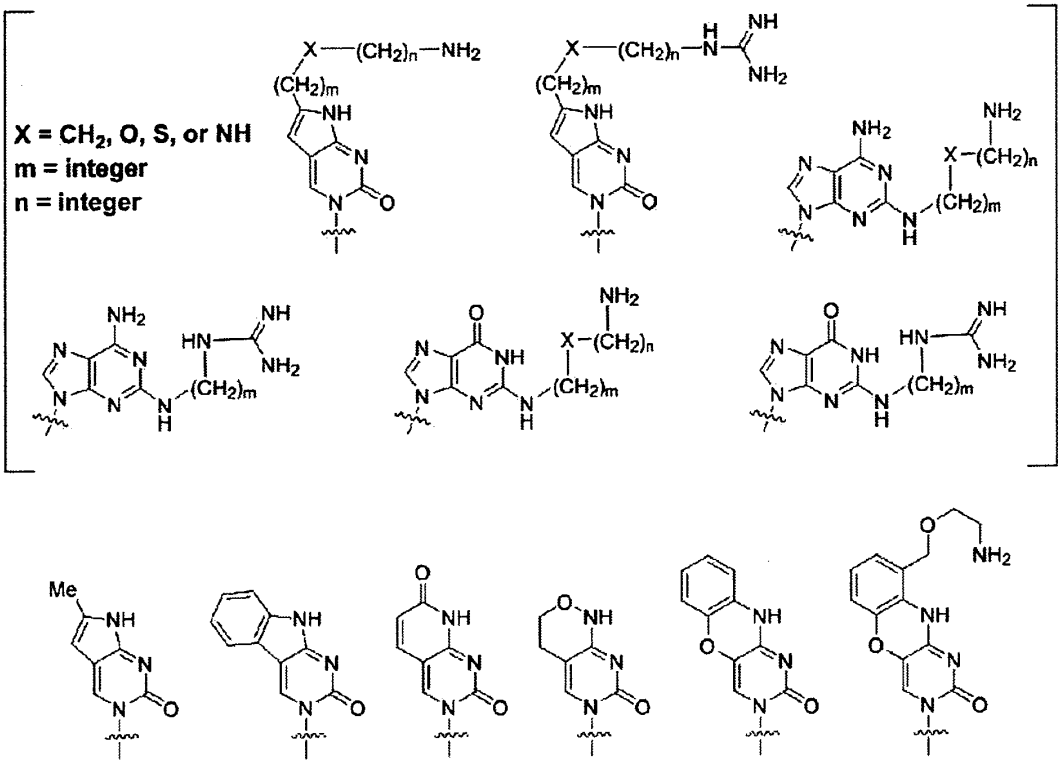
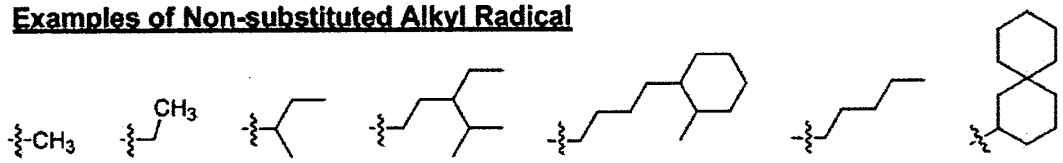


Fig. 2a

Examples of Non-substituted Alkyl Radical



Examples of Substituted Alkyl Radical

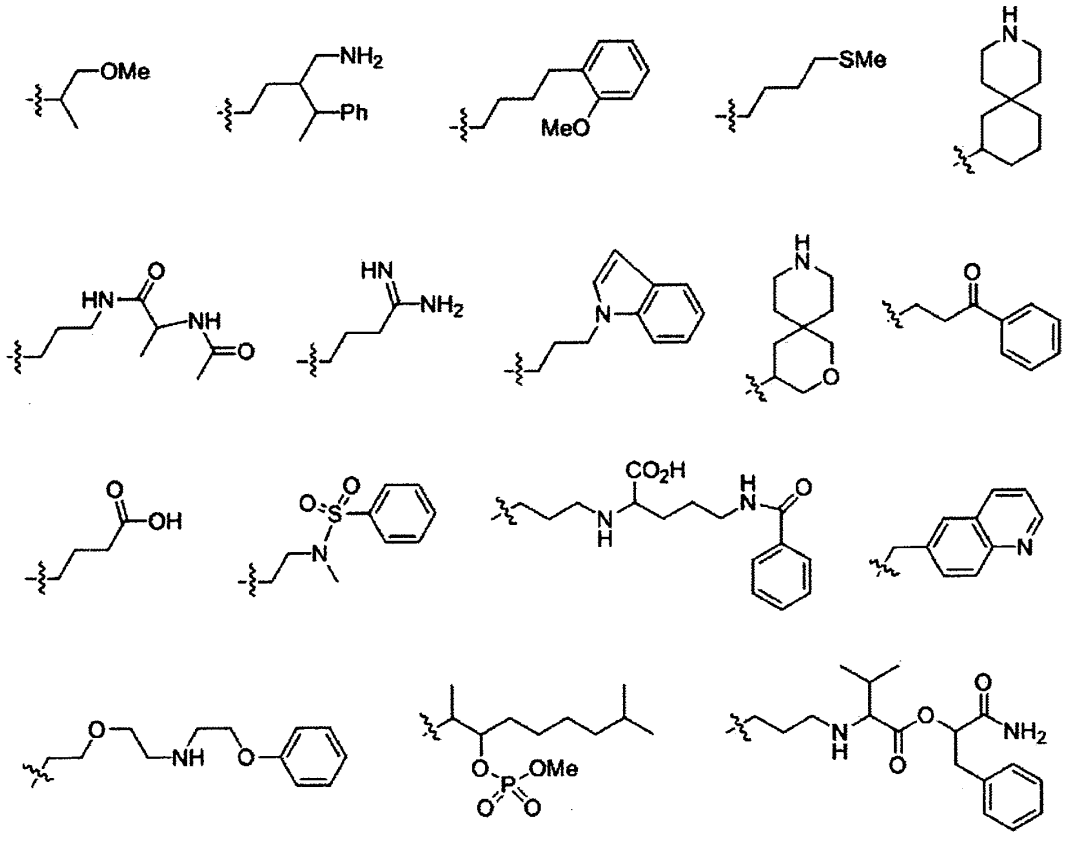
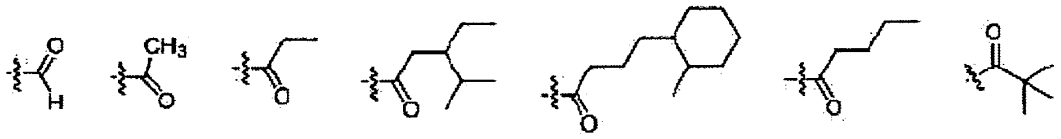
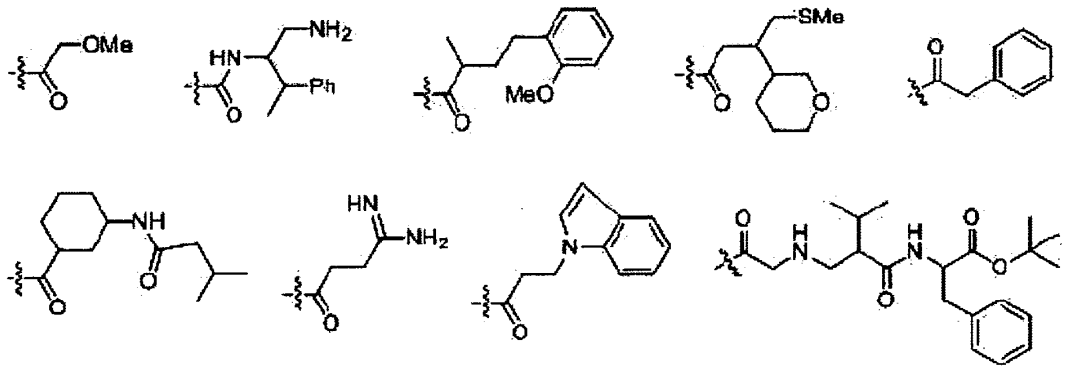


Fig. 2b

Examples of Non-substituted Alkylacyl Radical



Examples of Substituted Alkylacyl Radical



Examples of Substituted or Non-substituted Arylacyl Radical

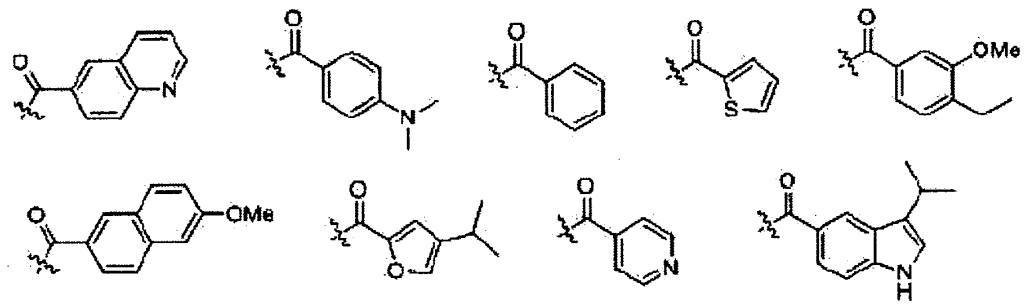
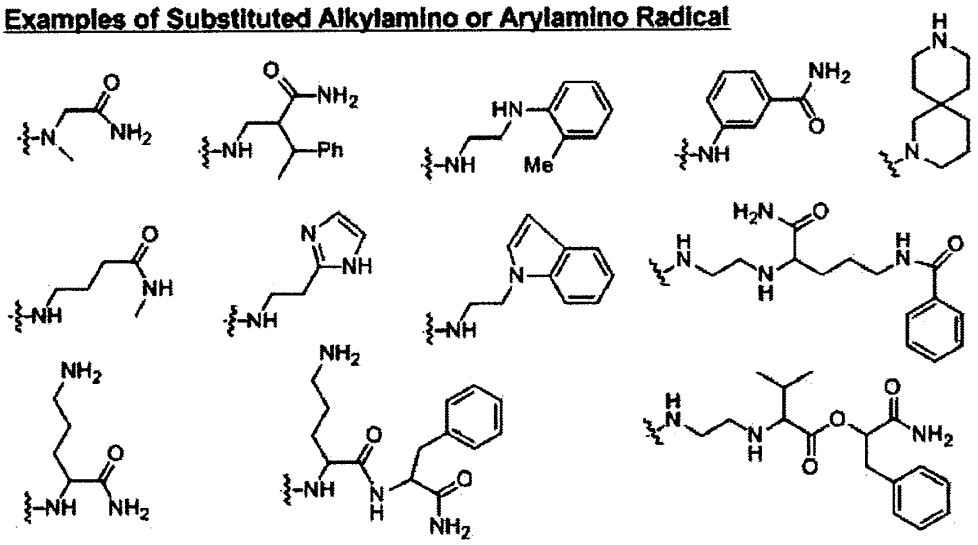
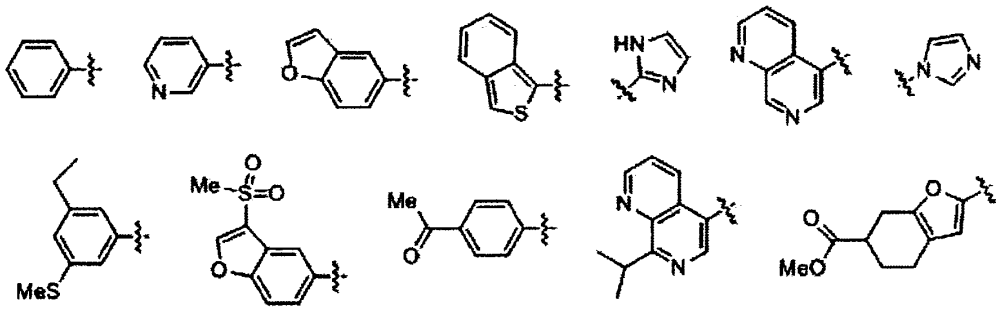


Fig. 2c

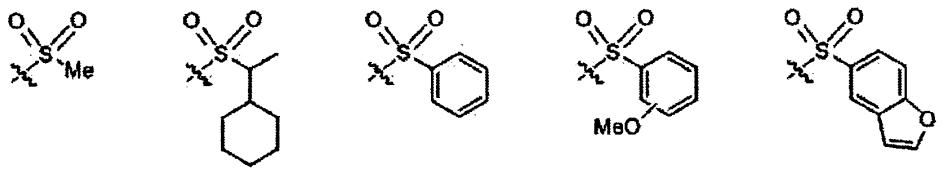
Examples of Substituted Alkylamino or Arylamino Radical



Examples of Substituted or Non-substituted Aryl Radical



Examples of Substituted or Non-substituted Alkylsulfonyl or Arylsulfonyl Radical



Examples of Substituted or Non-substituted Alkyl- or Aryl-phosphonyl Radical

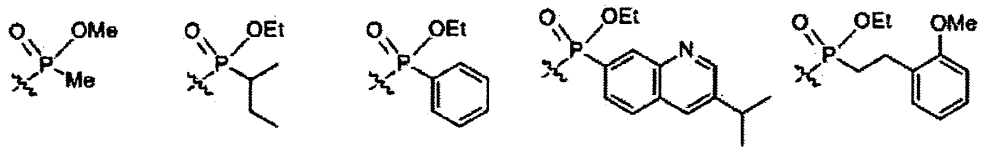
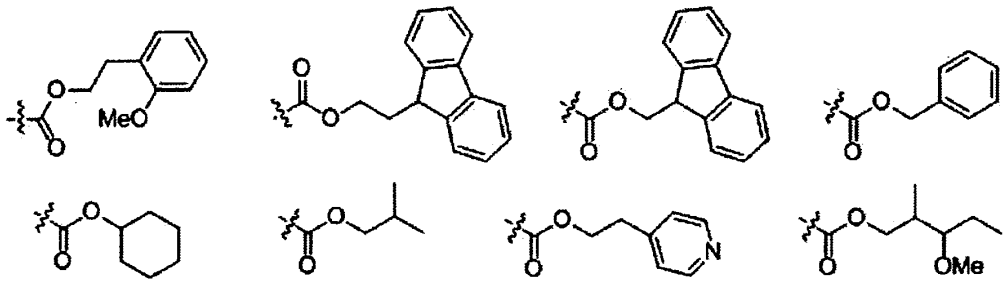
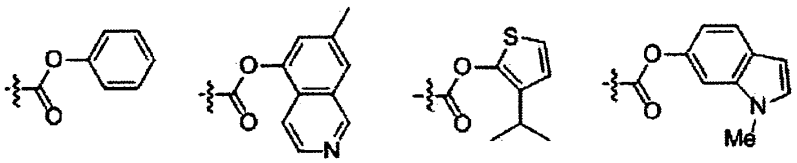


Fig. 2d

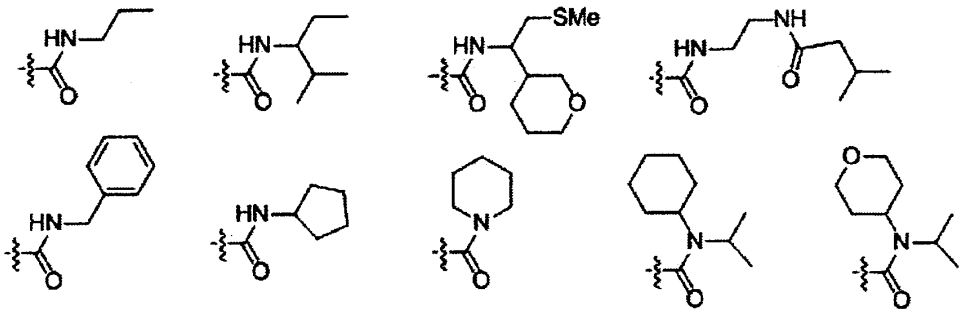
Examples of Substituted or Non-substituted Alkyloxycarbonyl Radical



Examples of Substituted or Non-substituted Aryloxycarbonyl Radical



Examples of Substituted or Non-substituted Alkylaminocarbonyl Radical



Examples of Substituted or Non-substituted Arylaminocarbonyl Radical

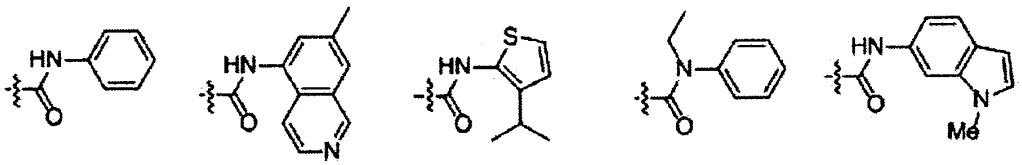
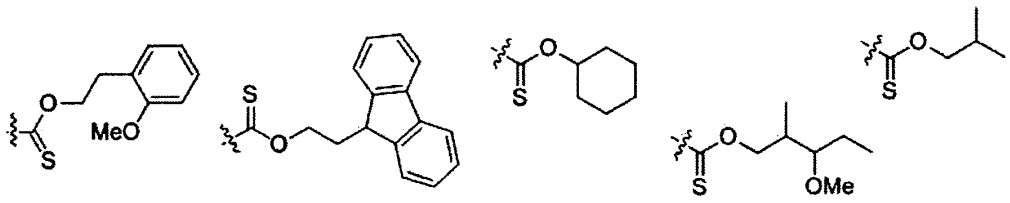
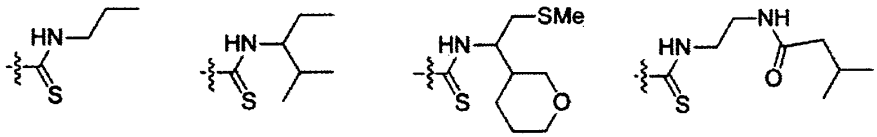


Fig. 2e

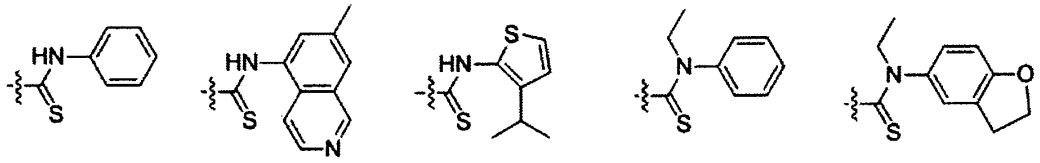
Examples of Substituted or Non-substituted Alkyloxythiocarbonyl Radical



Examples of Substituted or Non-substituted Alkylaminothiocarbonyl Radical



Examples of Substituted or Non-substituted Arylaminothiocarbonyl Radical



Examples of Substituted or Non-substituted Aryloxythiocarbonyl Radical

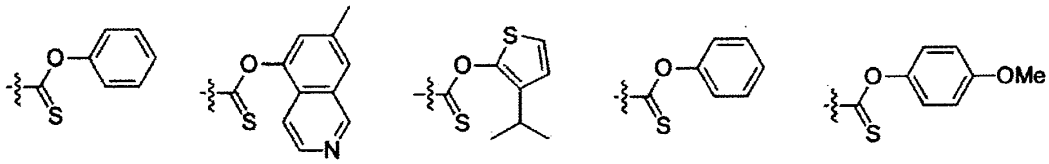
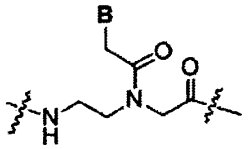


Fig. 3

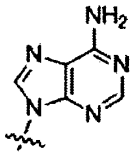
PNA Monomer



B : Nucleobase
X : O (oxygen atom)
m : Integer
n : Integer

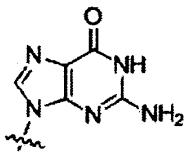
Adenine

B =



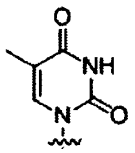
Guanine

B =



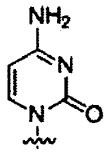
Thymine

B =



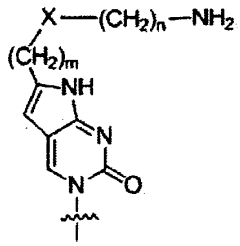
Cytosine

B =



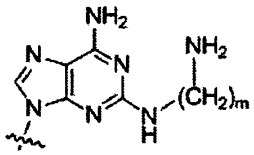
Modified Cytosine

C(mXn) : **B** =



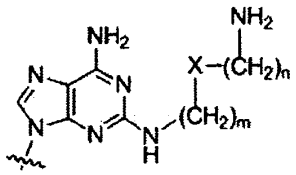
Modified Adenine

A(m) : **B** =



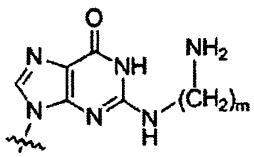
A(mXn) :

B =



Modified Guanine

G(m) : **B** =



G(mXn) :

B =

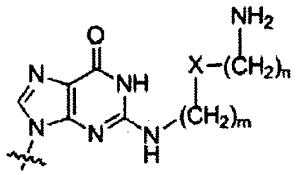


Fig. 4

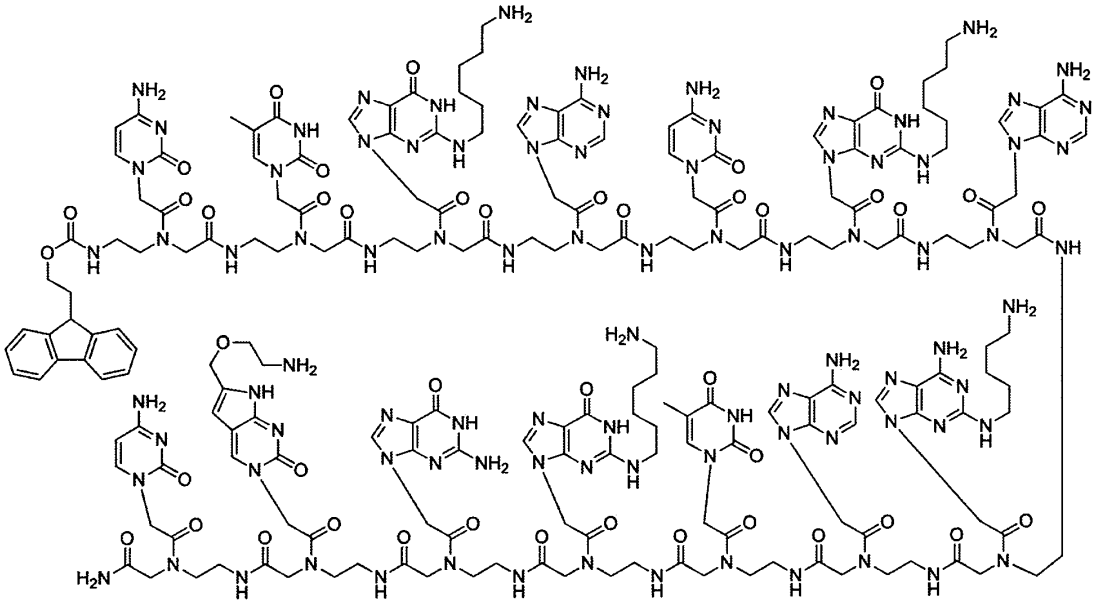
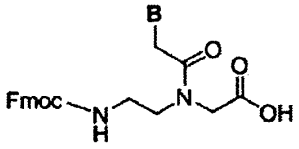
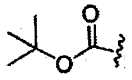


Fig. 5

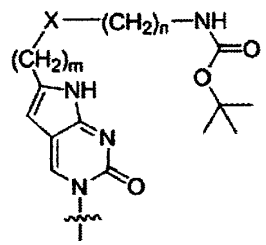
Fmoc-PNA Monomer



B : Nucleobase with protecting group(s)
X : methylene, oxygen, sulfur, or Boc-protected amino
m : Integer
n : Integer

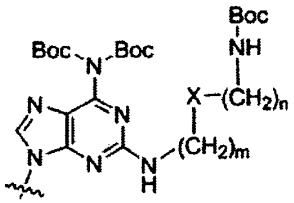
Boc- 

Modified Cytosine

C(mXn) : B = 

Modified Adenine

A(mXn) :

B = 

Modified Guanine

G(mXn) :

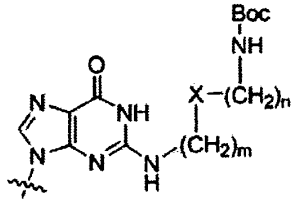
B = 

Fig. 6a

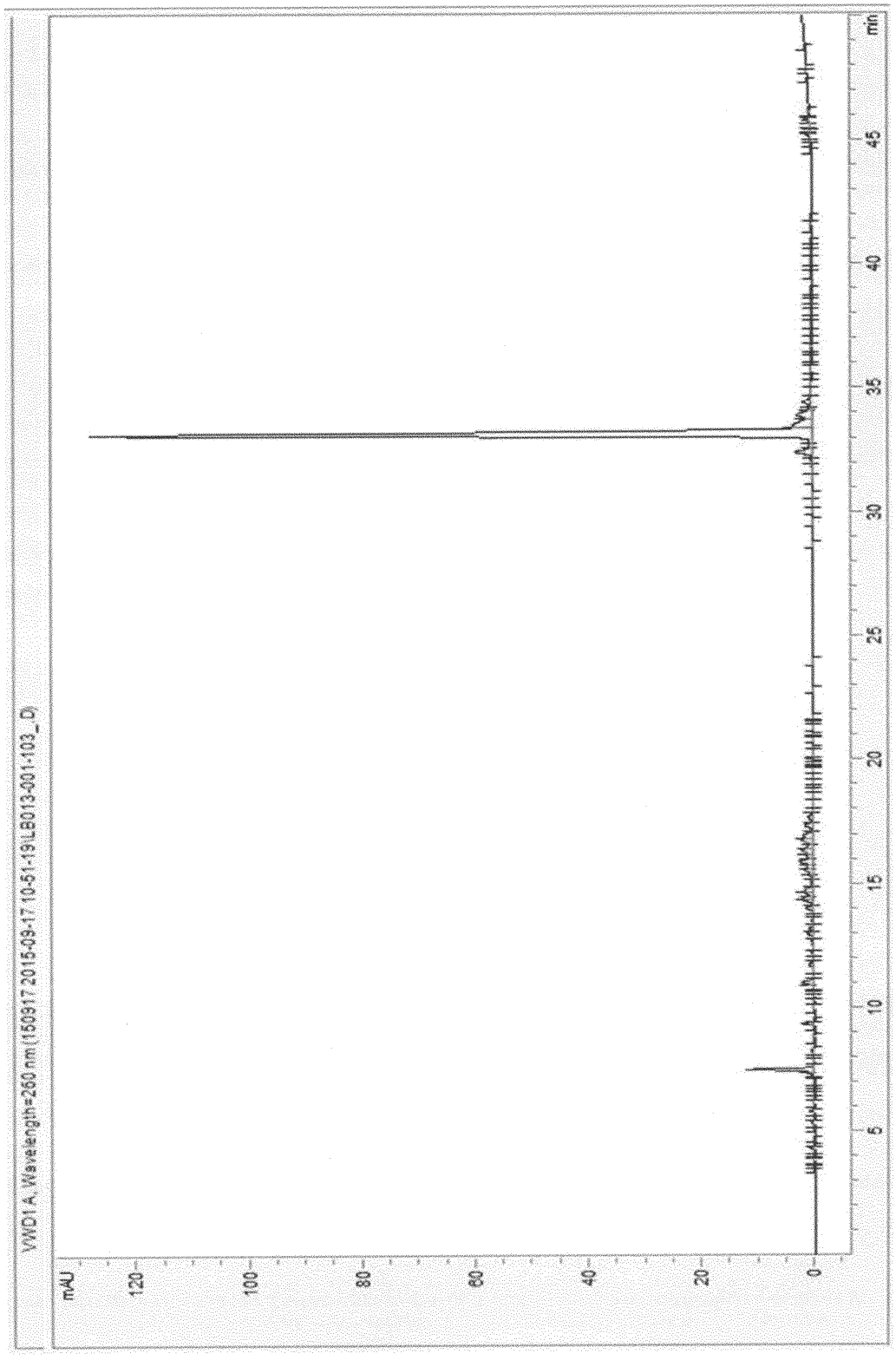

VWD1A, Wavelength=260 nm (150917 2015-09-17 10-51-19\LB013-001-103_D)
mAU
120
100
80
60
40
20
0
min
5
10
15
20
25
30
35
40
45

Fig. 6b

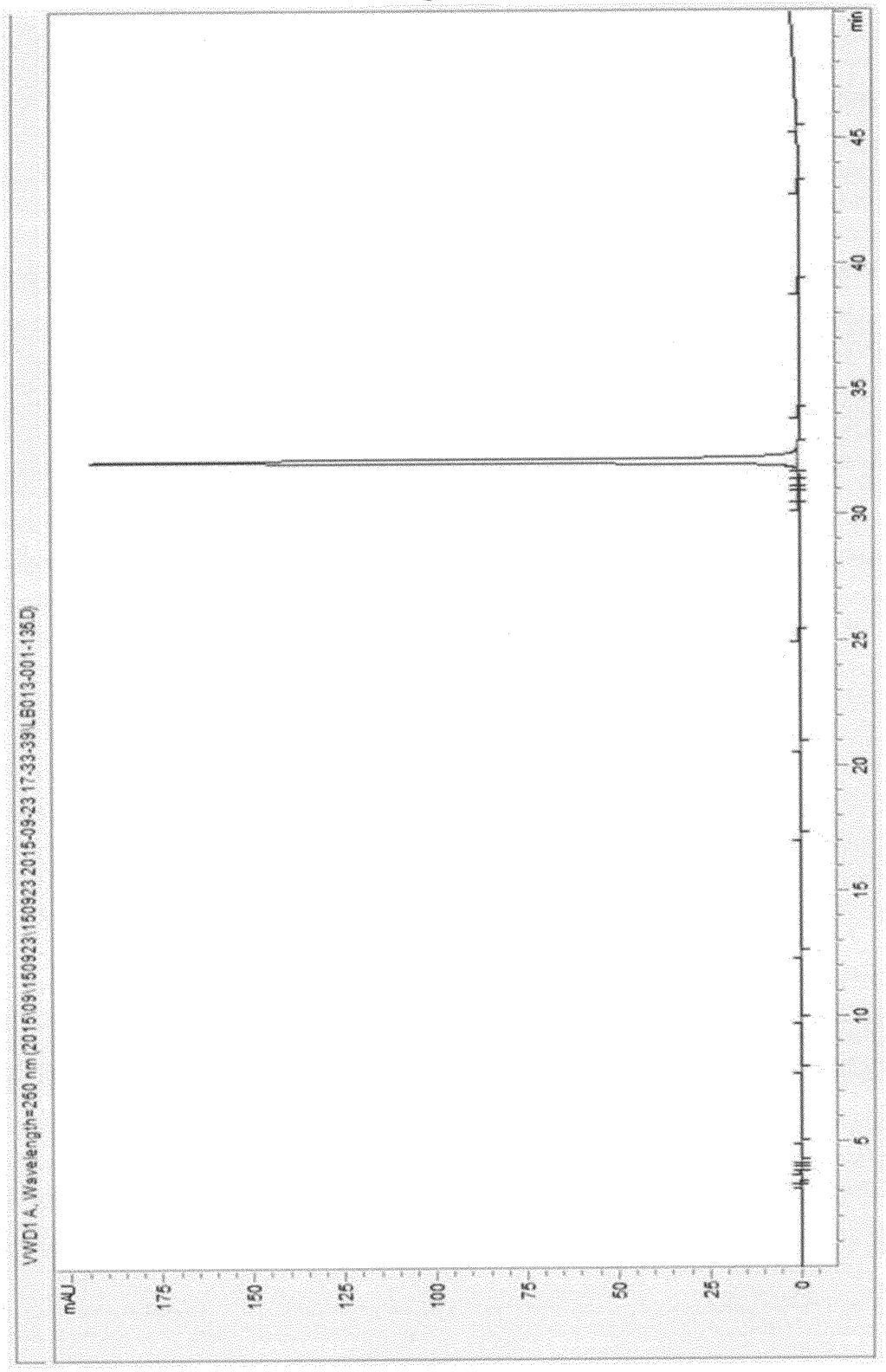

VWD1 A, Wavelength=260 nm (2015-09\150923\150923 2015-09-23 17-33-39\LB013-001-13B.D)
mAU
175
150
125
100
75
50
25
0
min
5
10
15
20
25
30
35
40
45

Fig. 7

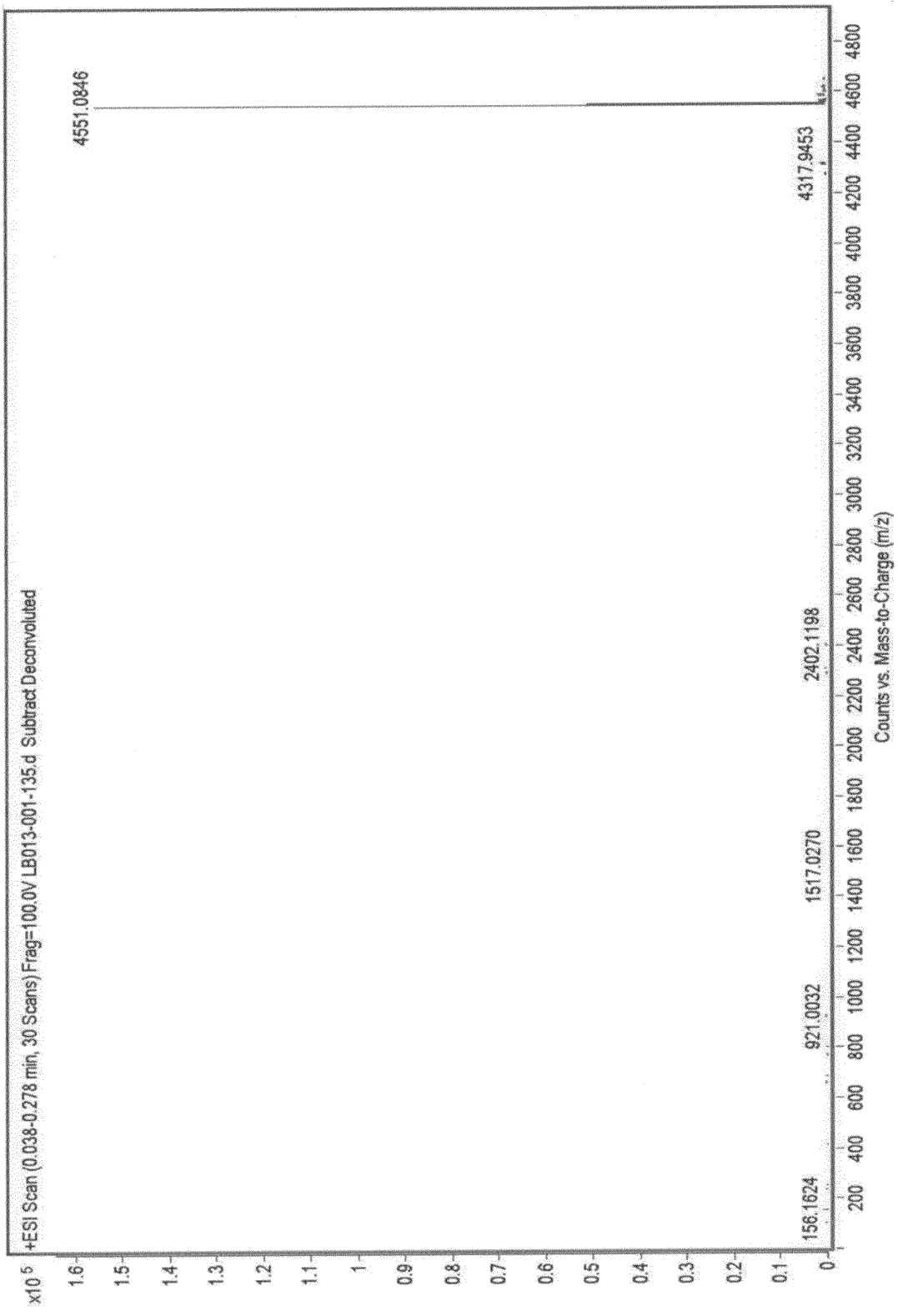

+ESI Scan (0.038-0.278 min, 30 Scans) Frag=100.0V LB013-001-135.d Subtract Deconvoluted
x10 5
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
156.1624
921.0032
1517.0270
2402.1198
4317.9453
4551.0846
200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200 4400 4600 4800
Counts vs. Mass-to-Charge (m/z)

Fig. 8

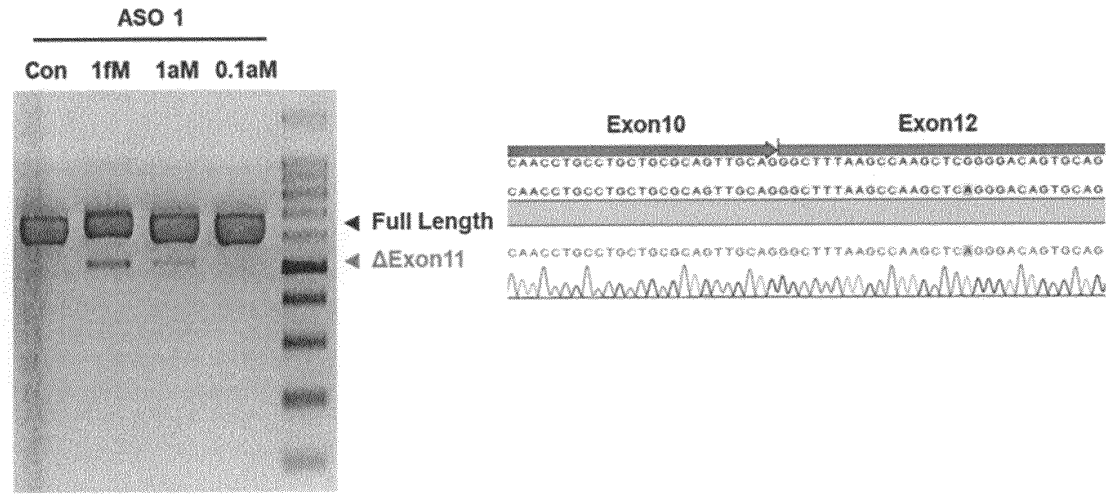

ASO 1
Con
1fM
1aM
0.1aM
Full Length
ΔExon11
Exon10
Exon12

Fig. 9

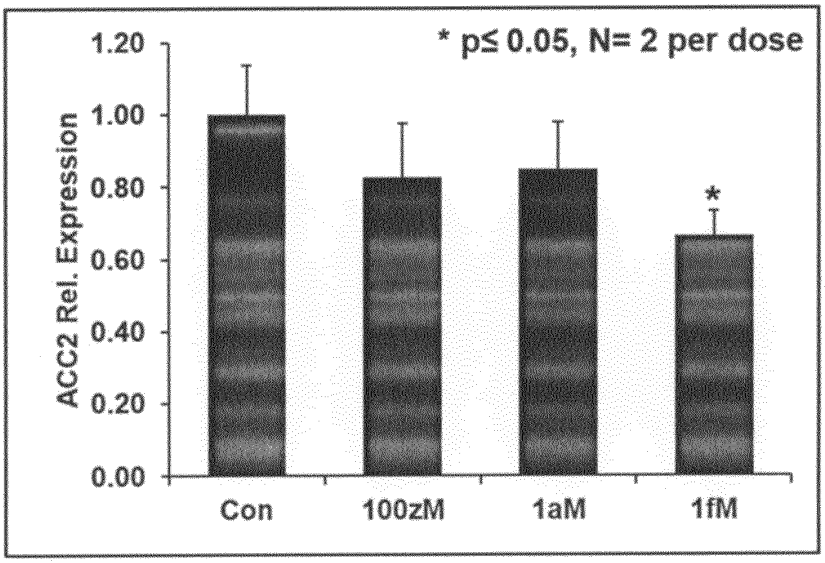

* p≤ 0.05, N= 2 per dose
ACC2 Rel. Expression
1.20
1.00
0.80
0.60
0.40
0.20
0.00
*
Con
100zM
1aM
1fM

Fig. 10

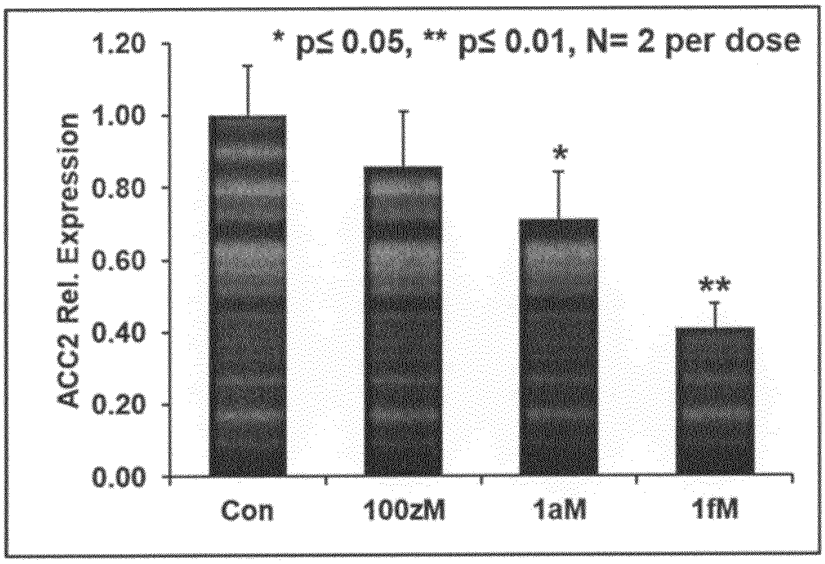
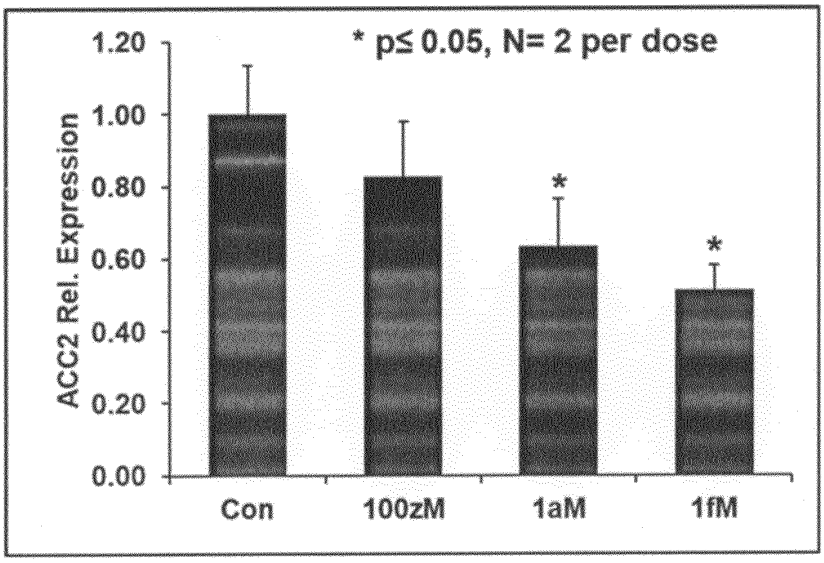

* p≤ 0.05, ** p≤ 0.01, N= 2 per dose
ACC2 Rel. Expression
1.20
1.00
0.80
0.60
0.40
0.20
0.00
*
**
Con
100zM
1aM
1fM

Fig. 11


* p≤ 0.05, N= 2 per dose
ACC2 Rel. Expression
1.20
1.00
0.80
0.60
0.40
0.20
0.00
*
*
Con
100zM
1aM
1fM