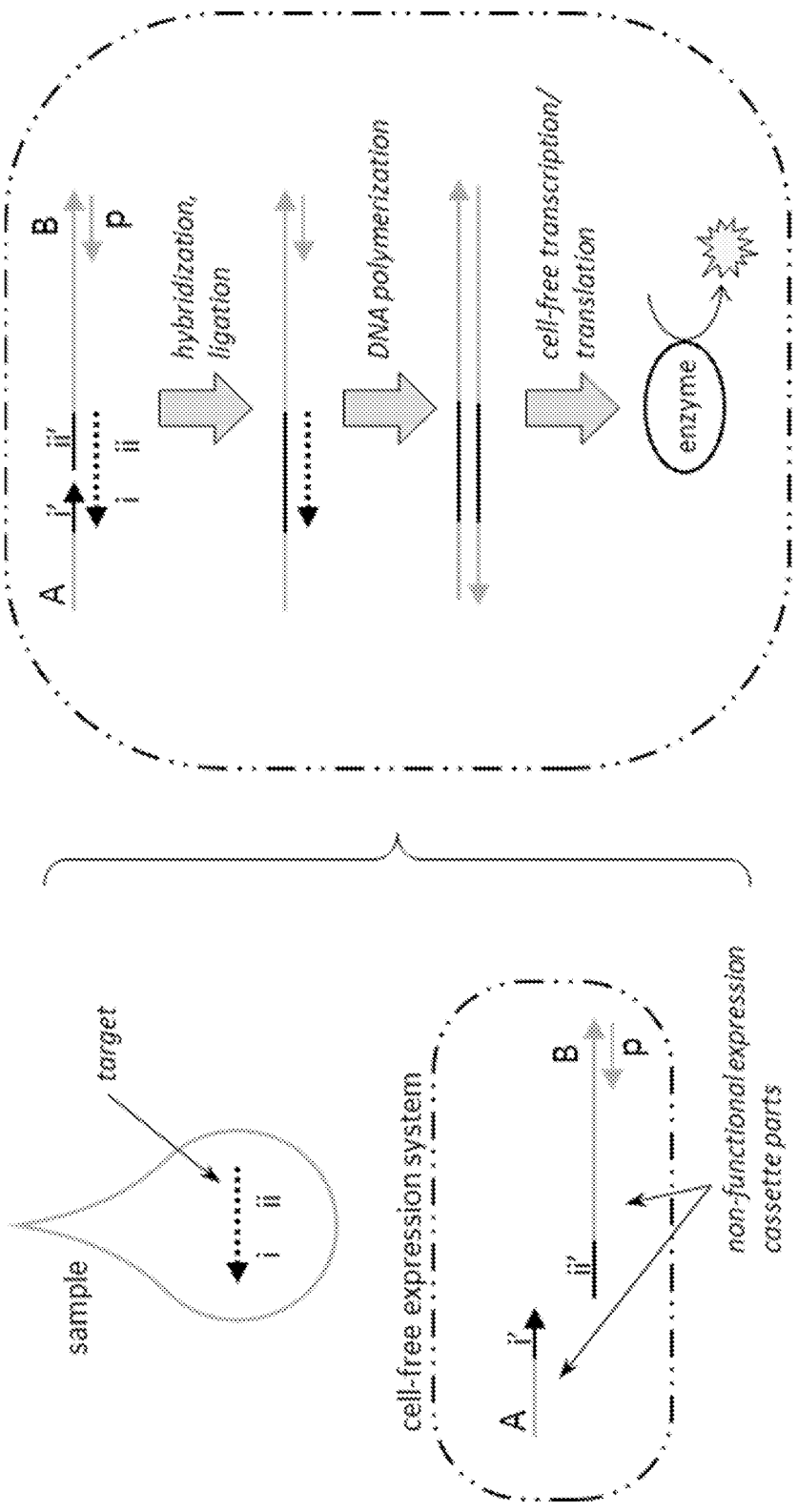

sample
target
i
ii
cell-free expression system
A
i'
ii'
B
P
non-functional expression cassette parts
hybridization, ligation
DNA polymerization
cell-free transcription/ translation
enzyme

Fig. 1

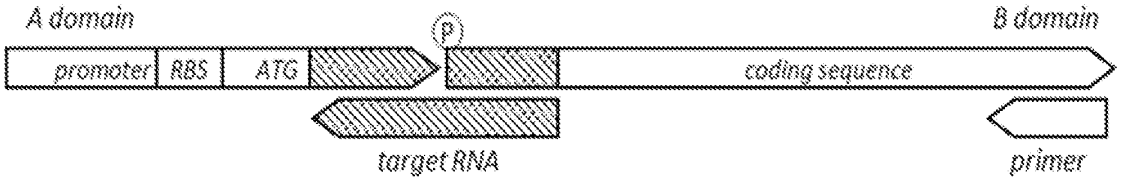

A domain
B domain
promoter
RBS
ATG
coding sequence
target RNA
primer

Fig. 2A

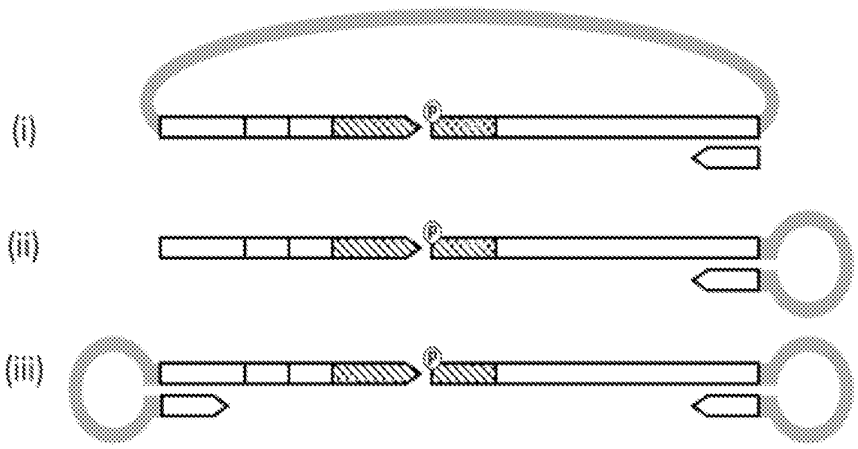

(i)
(ii)
(iii)

Fig. 2B


Version 1
Part A
Part B
Coding Sequence
Version 2
Part A
Part B
Coding Sequence
Version 3
Part A
Part B
Coding Sequence

Fig. 3

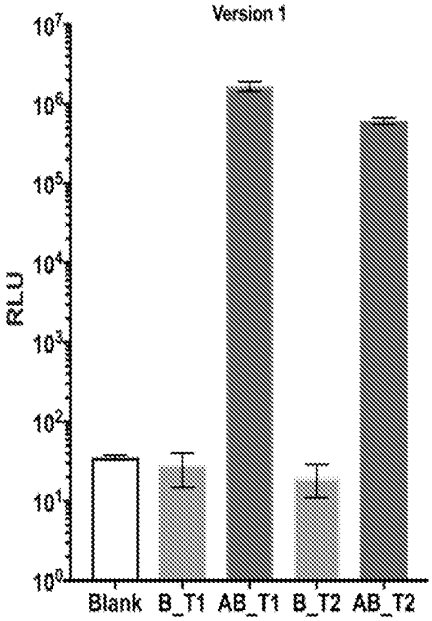

Version 1
RLU
10^7
10^6
10^5
10^4
10^3
10^2
10^1
10^0
Blank
B_T1
AB_T1
B_T2
AB_T2

Fig. 4A

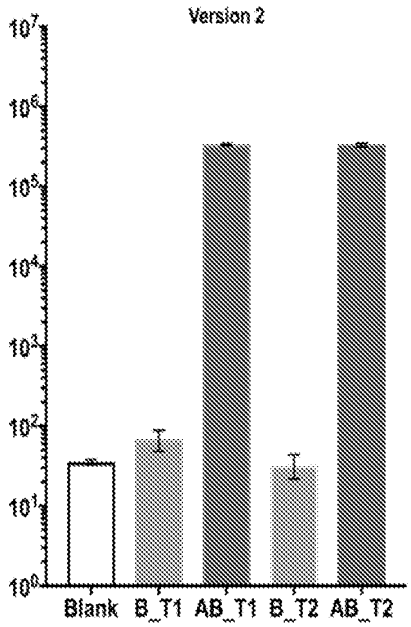

Version 2
10^7
10^6
10^5
10^4
10^3
10^2
10^1
10^0
Blank
B_T1
AB_T1
B_T2
AB_T2

Fig. 4B

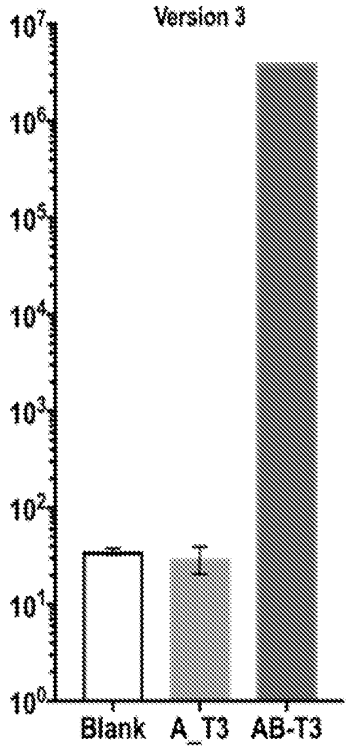


Fig. 4C

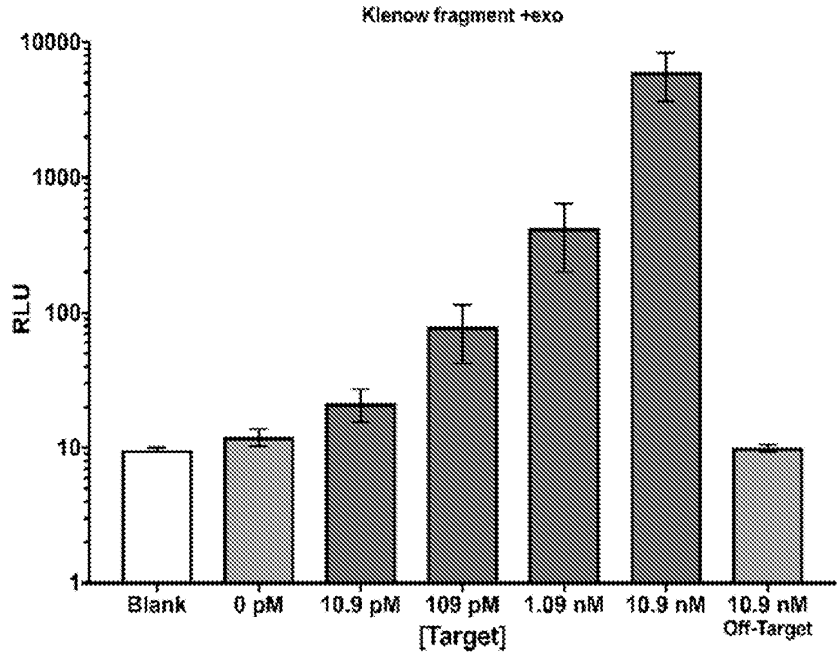

Klenow fragment +exo
RLU
10000
1000
100
10
1
Blank
0 pM
10.9 pM
109 pM
1.09 nM
10.9 nM
10.9 nM
Off-Target
[Target]

Fig. 5A

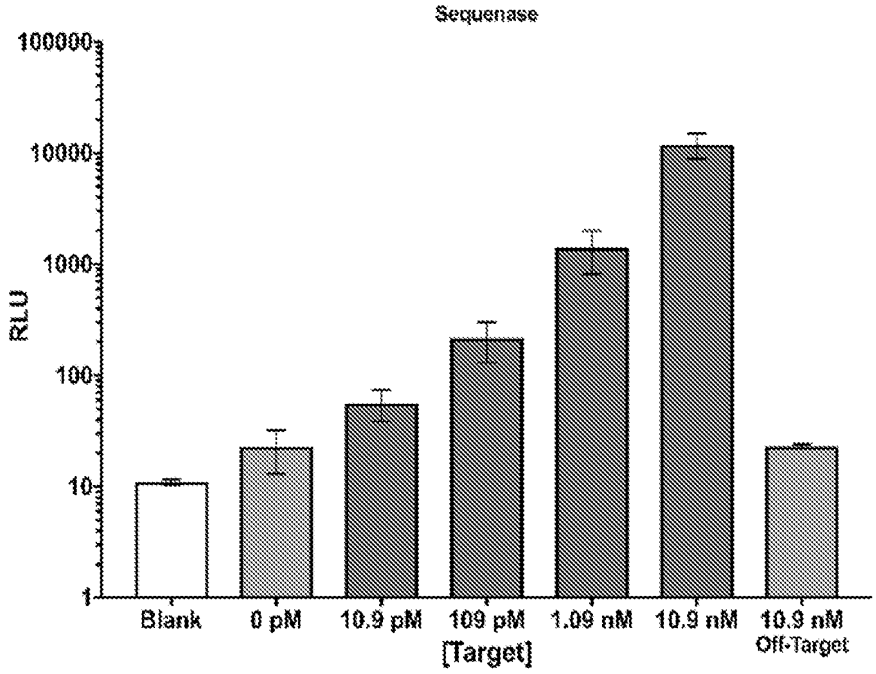

Sequenase
RLU
100000
10000
1000
100
10
1
Blank
0 pM
10.9 pM
109 pM
1.09 nM
10.9 nM
10.9 nM
Off-Target
[Target]

Fig. 5B

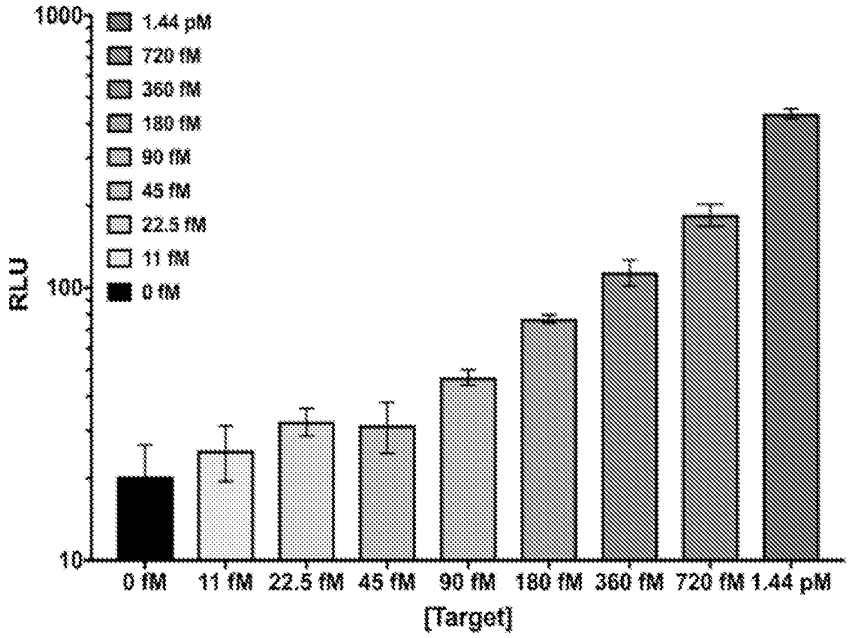

1000
100
10
RLU
1.44 pM
720 fM
360 fM
180 fM
90 fM
45 fM
22.5 fM
11 fM
0 fM
0 fM
11 fM
22.5 fM
45 fM
90 fM
180 fM
360 fM
720 fM
1.44 pM
[Target]

Fig. 6

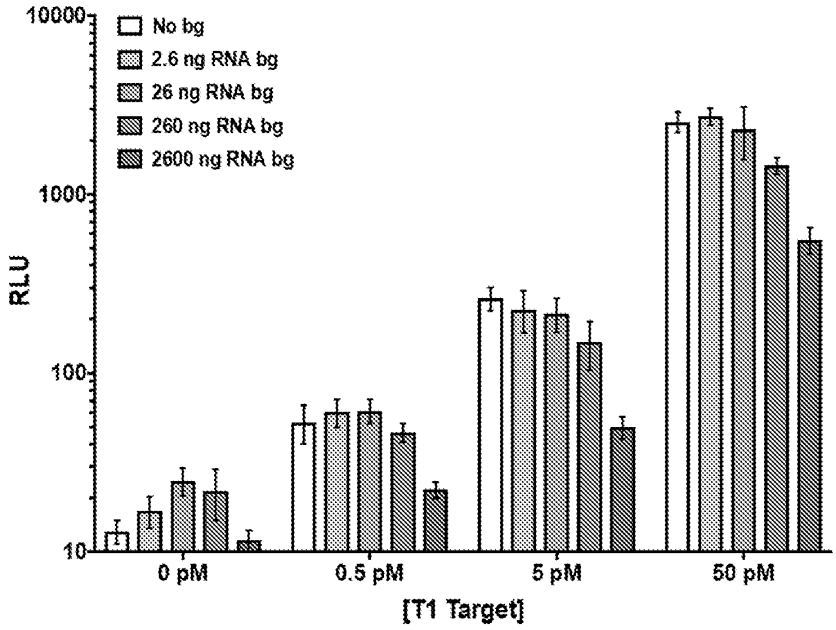

10000
1000
100
10
RLU
No bg
2.6 ng RNA bg
26 ng RNA bg
260 ng RNA bg
2600 ng RNA bg
0 pM
0.5 pM
5 pM
50 pM
[T1 Target]

Fig. 7

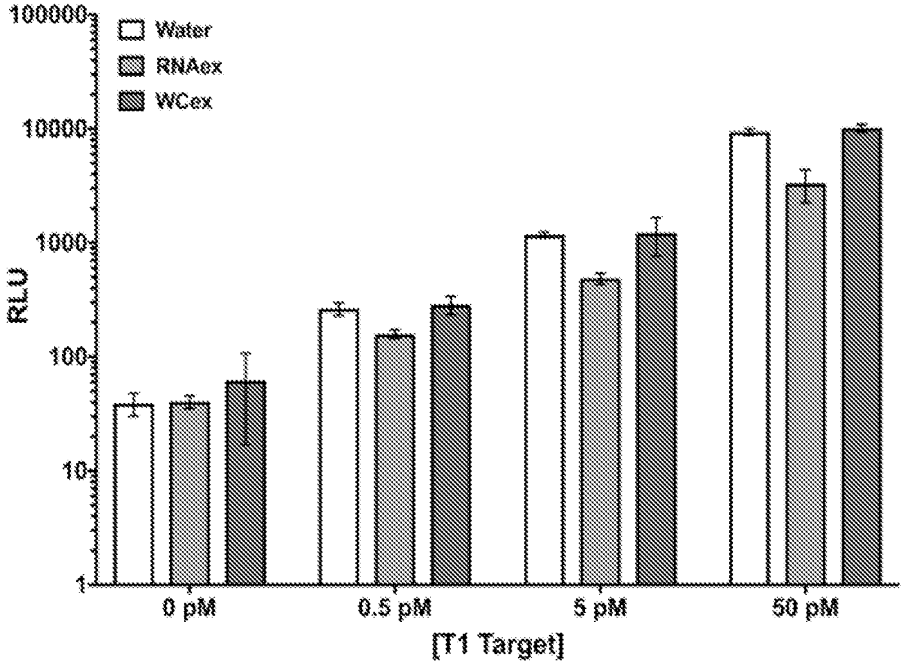

100000
10000
1000
100
10
1
RLU
Water
RNAex
WCex
0 pM
0.5 pM
5 pM
50 pM
[T1 Target]

Fig. 8

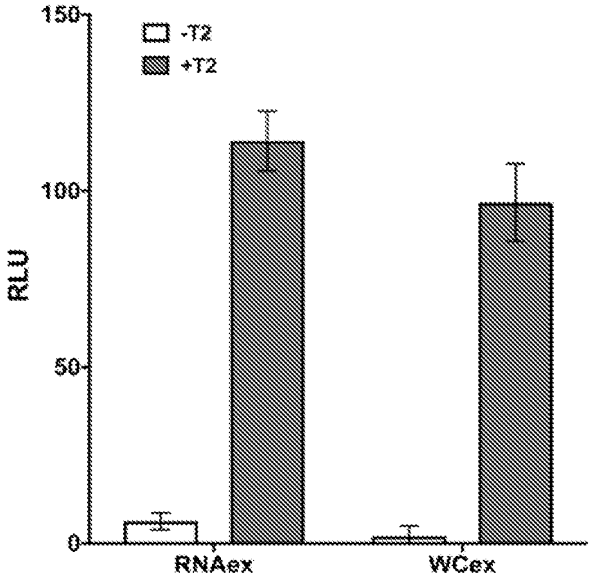

150
100
50
0
RLU
-T2
+T2
RNAex
WCex

Fig. 9

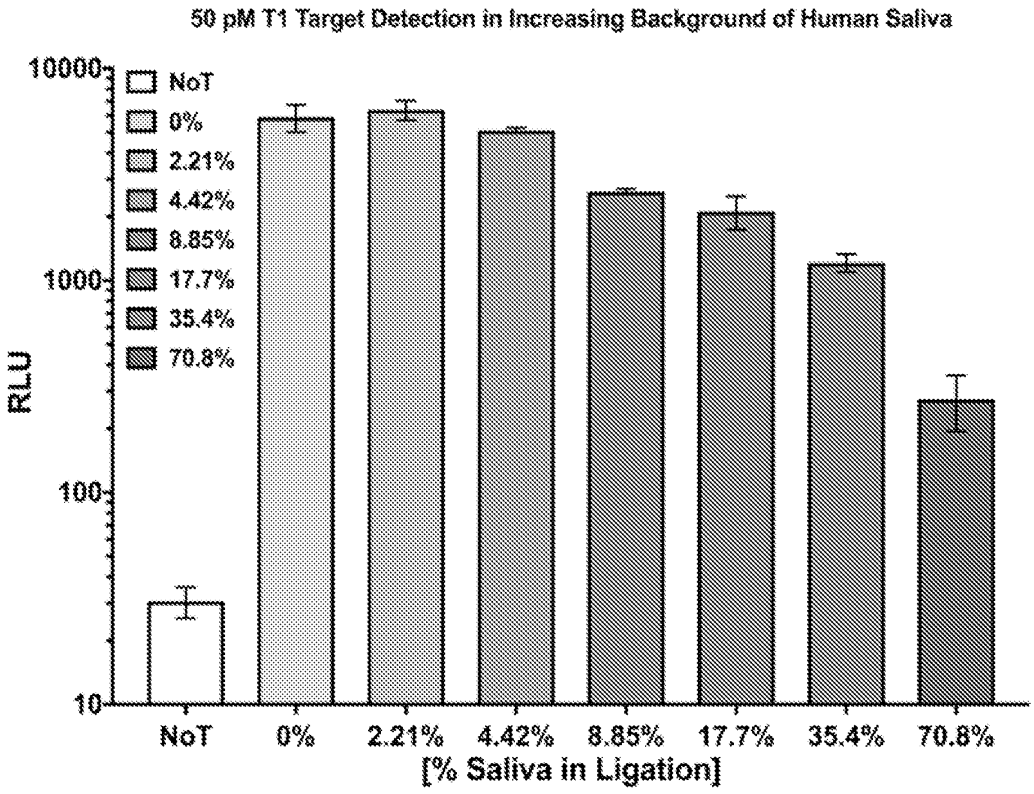

50 pM T1 Target Detection in Increasing Background of Human Saliva
10000
1000
100
10
RLU
NoT
0%
2.21%
4.42%
8.85%
17.7%
35.4%
70.8%
NoT
0%
2.21%
4.42%
8.85%
17.7%
35.4%
70.8%
[% Saliva in Ligation]

Fig. 10

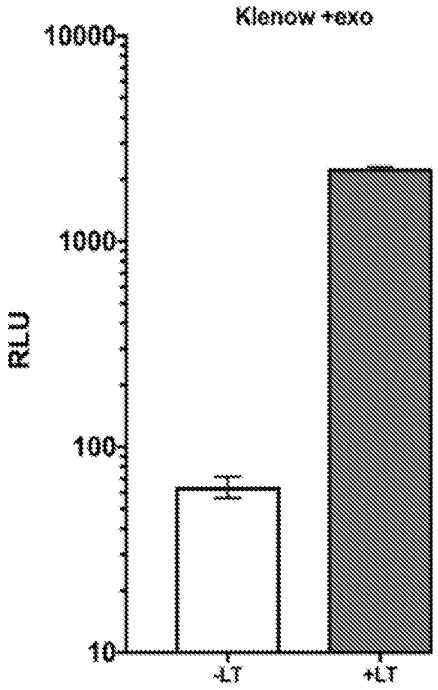


Fig. 11A

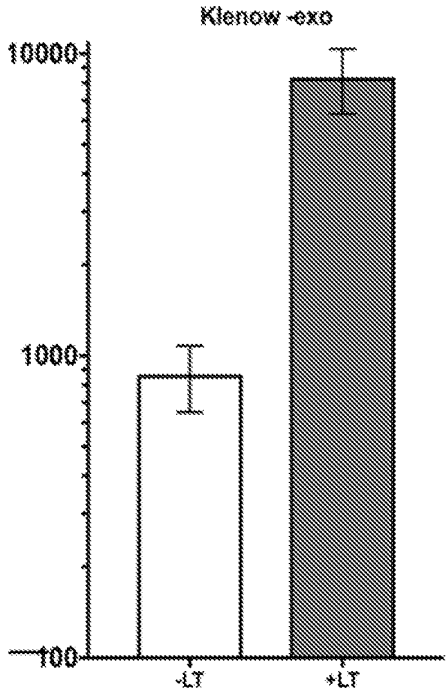


Fig. 11B

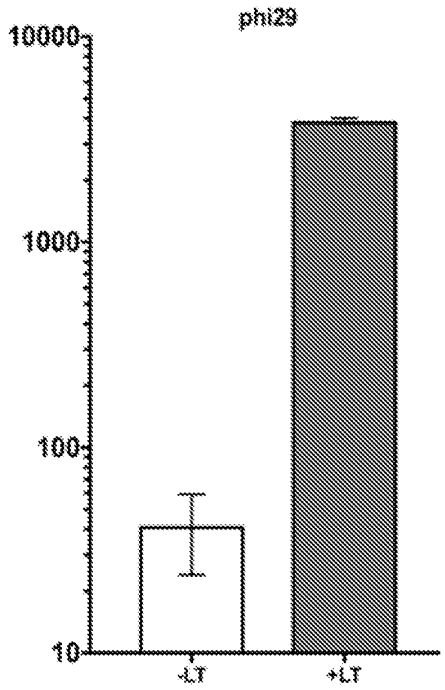


Fig. 11C

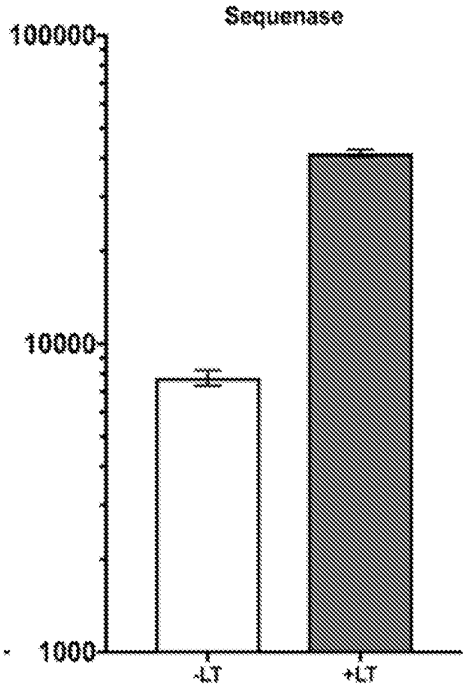


Fig. 11D

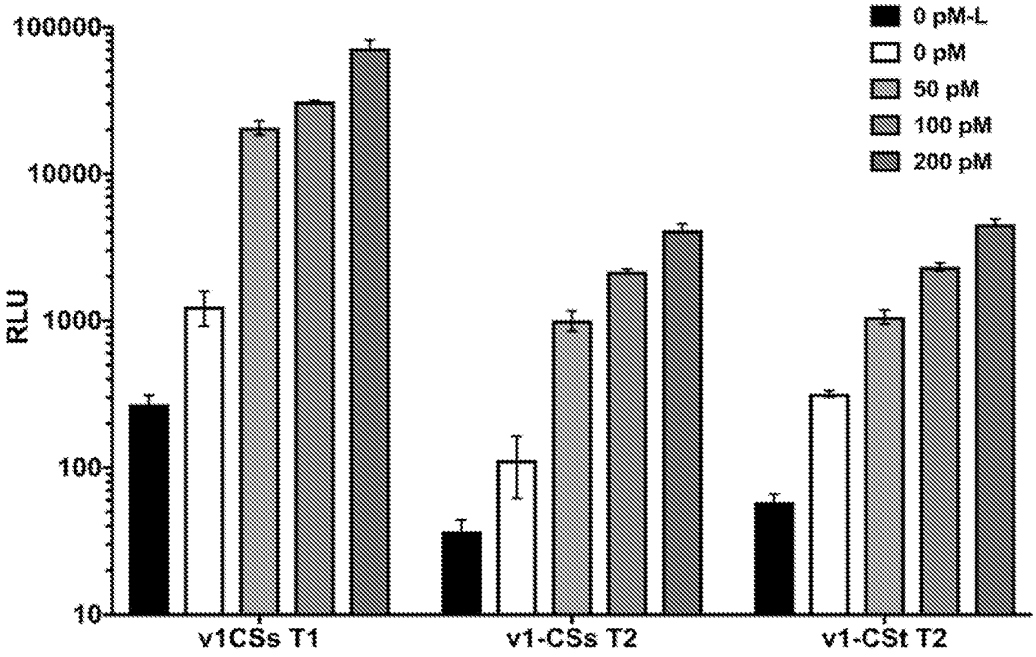

100000
10000
1000
100
10
RLU
0 pM-L
0 pM
50 pM
100 pM
200 pM
v1CSs T1
v1-CSs T2
v1-CSt T2

Fig. 12

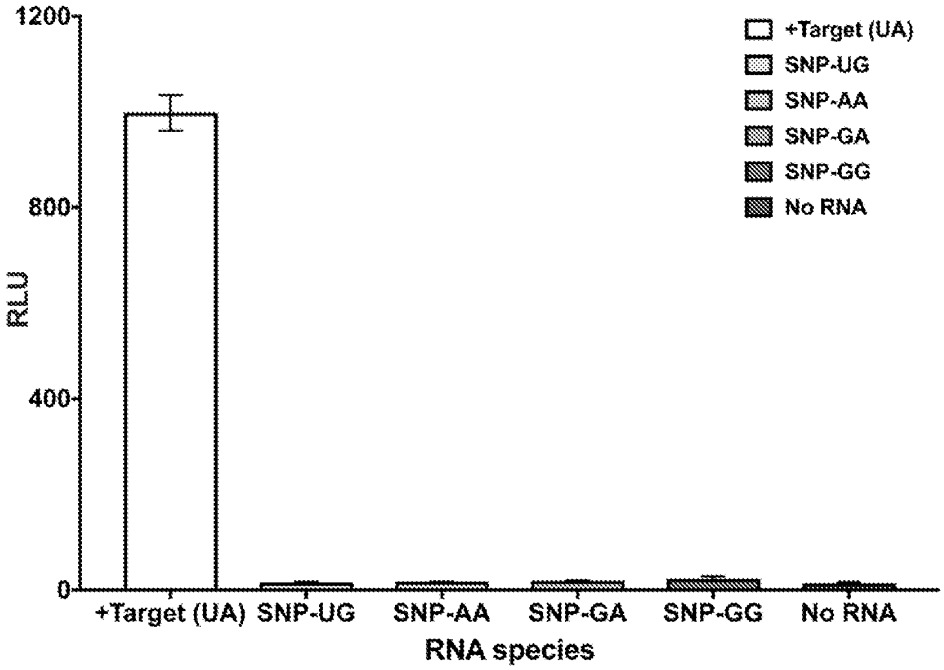

1200
800
400
0
RLU
+Target (UA)
SNP-UG
SNP-AA
SNP-GA
SNP-GG
No RNA
+Target (UA)
SNP-UG
SNP-AA
SNP-GA
SNP-GG
No RNA
RNA species

Fig. 13

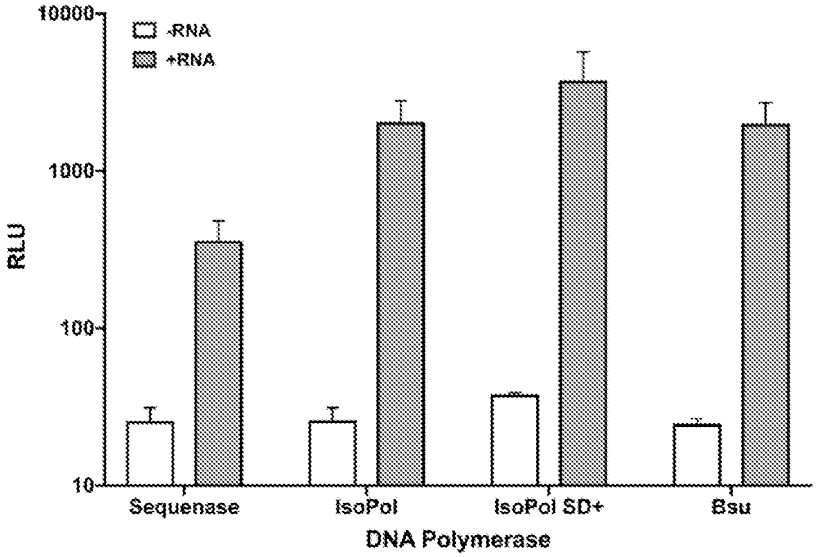


Fig. 14A

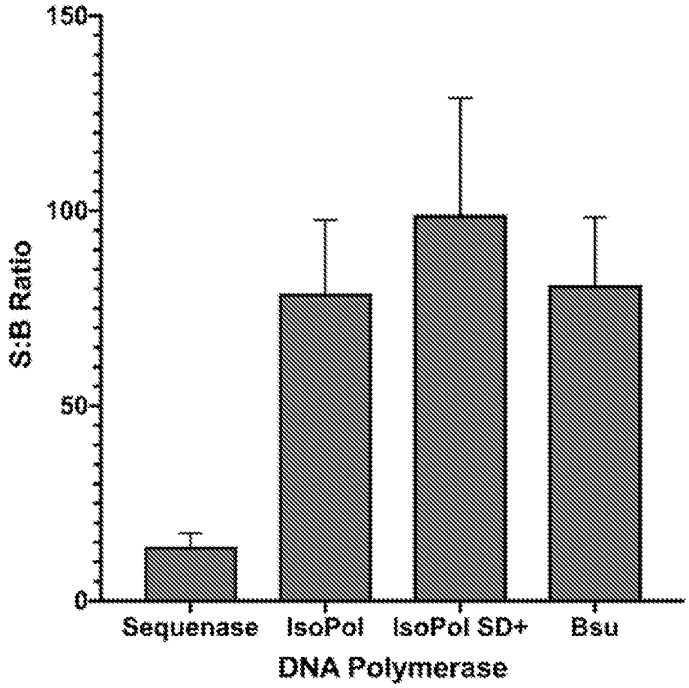


Fig. 14B

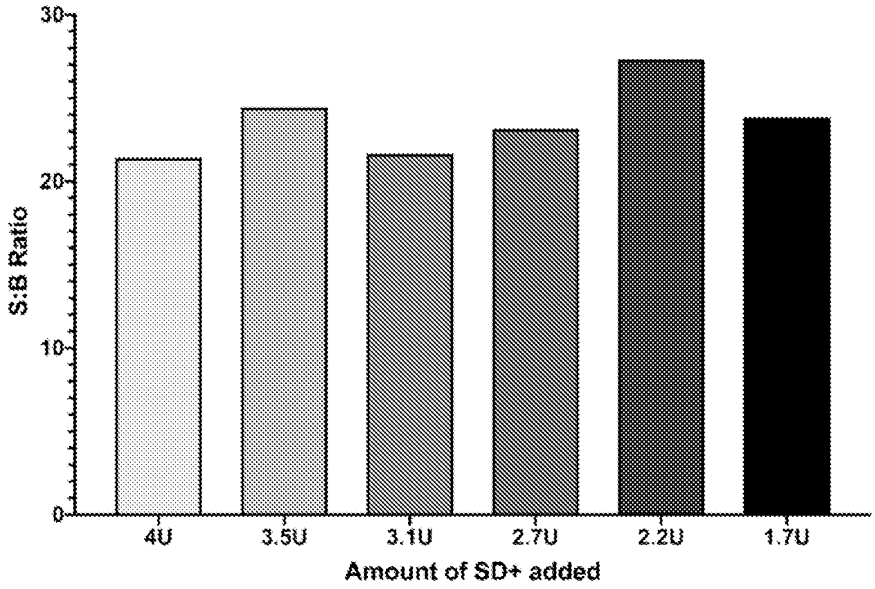


Fig. 14C

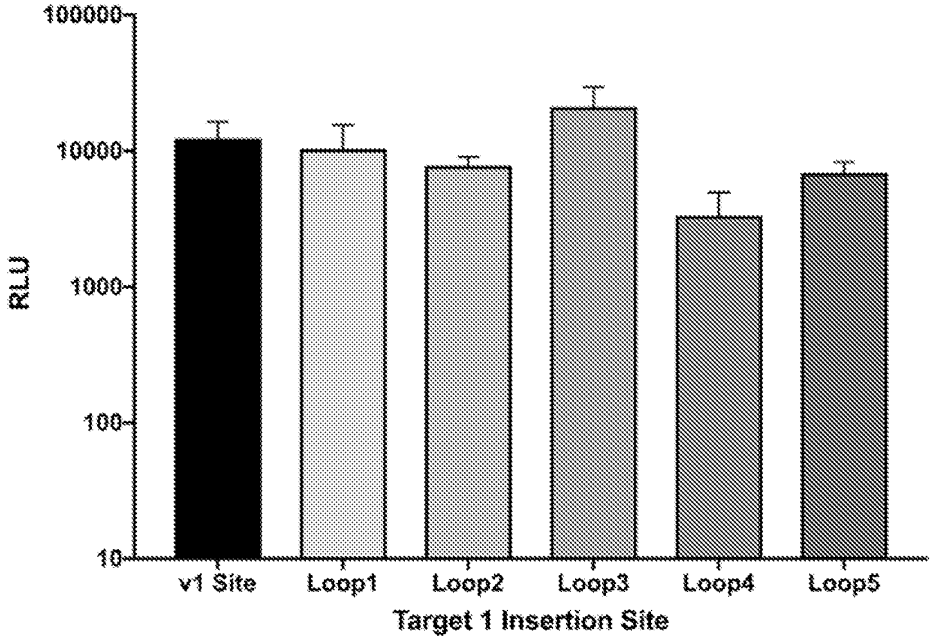


Fig. 15A

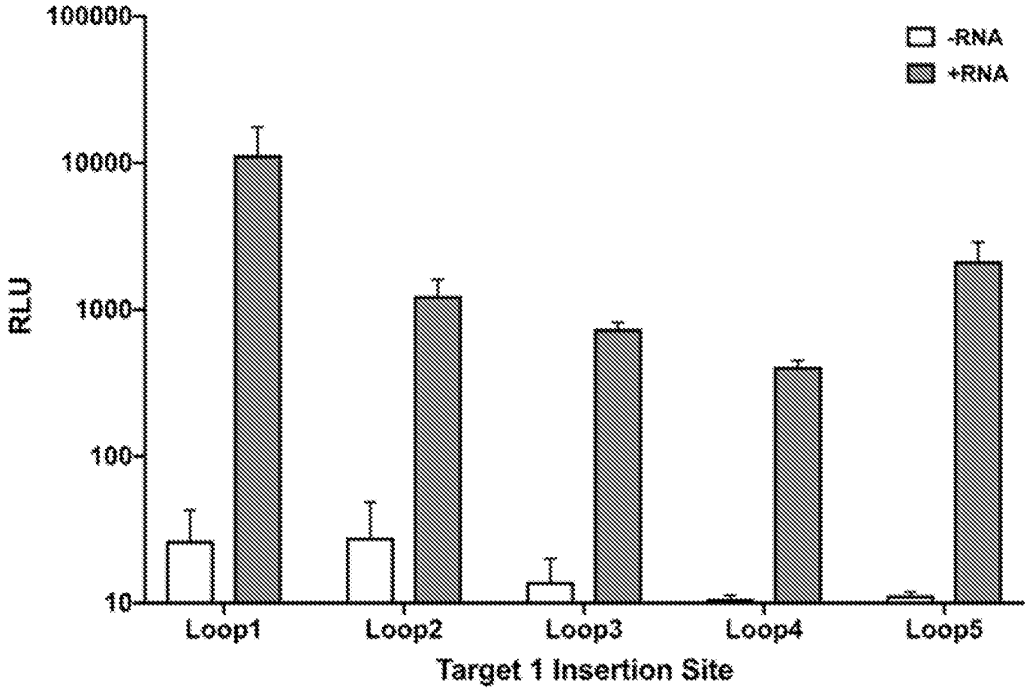


Fig. 15B

T7 Promotor	RBS-ATG	Part A	STOP

T7 Promotor	RBS-ATG	Part B	STOP

Fig. 16

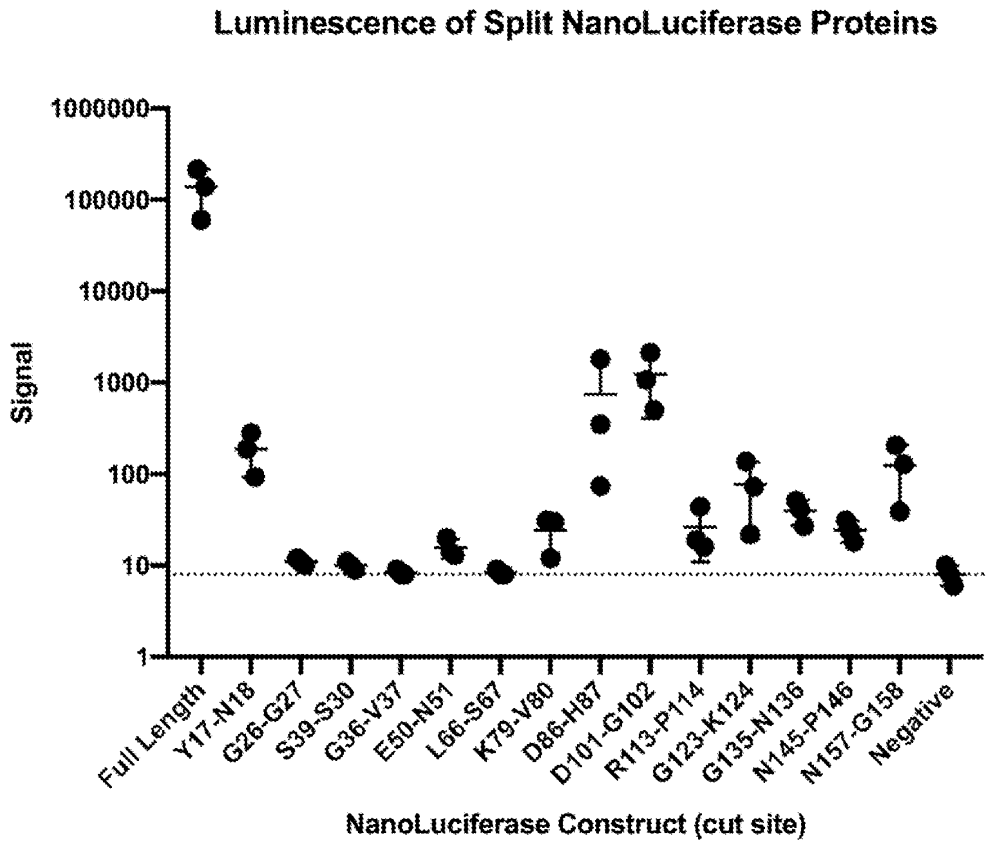


Fig. 17