

FIGURE 1

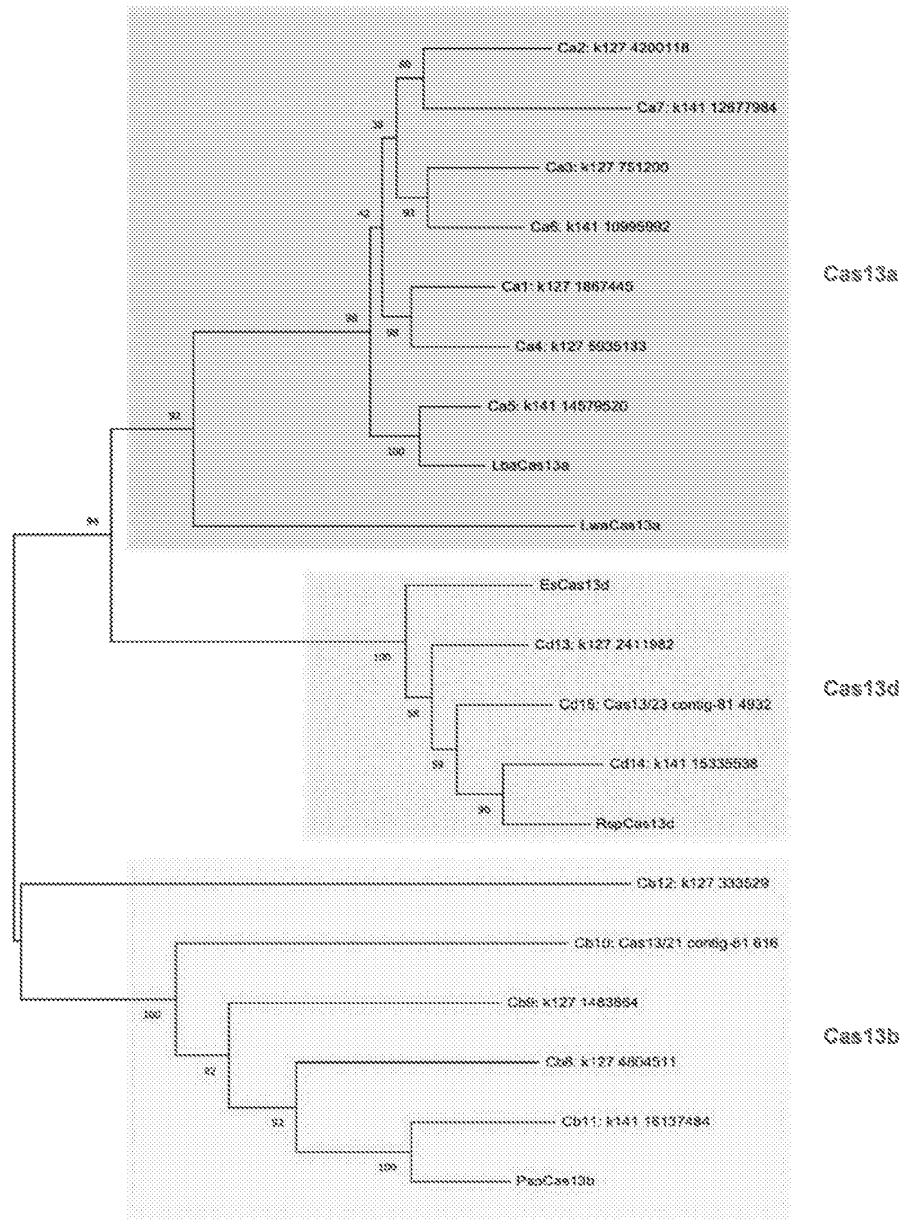


FIGURE 2

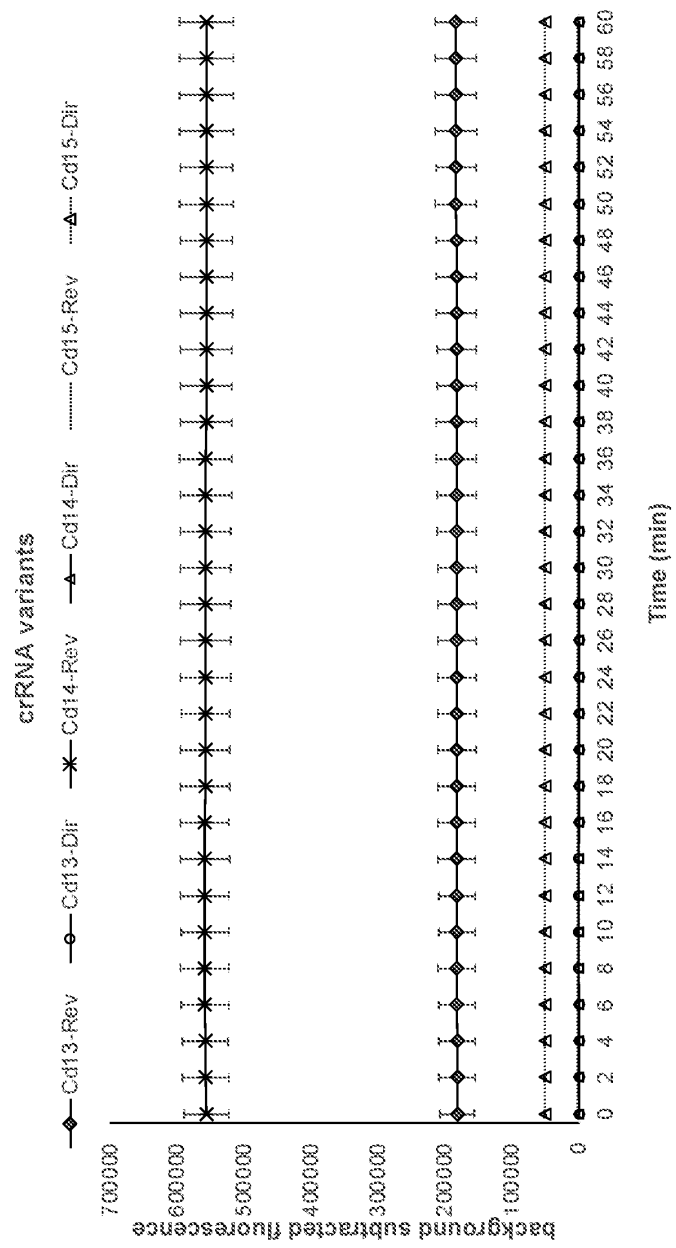
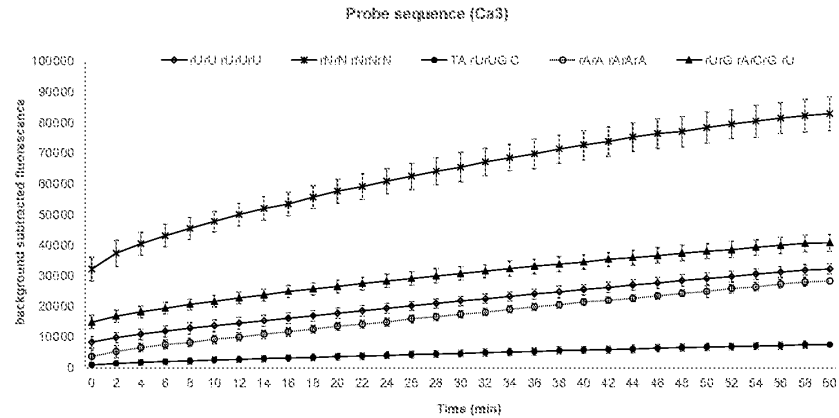
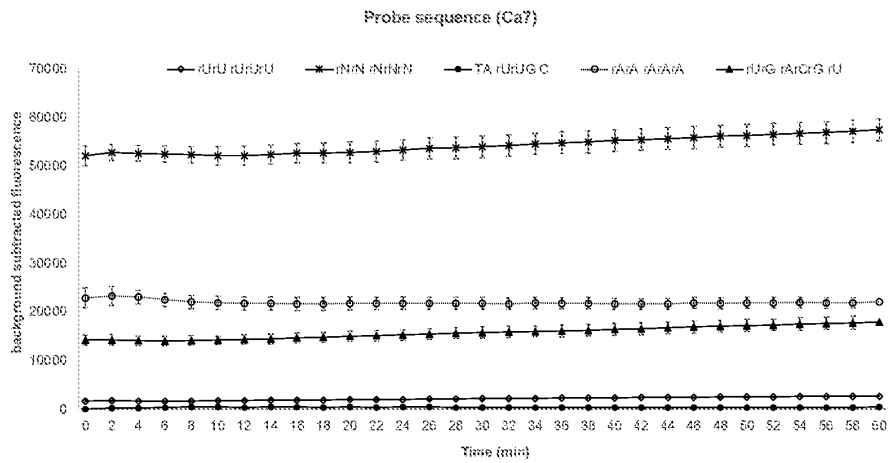


FIGURE 3

A:



B:



C:

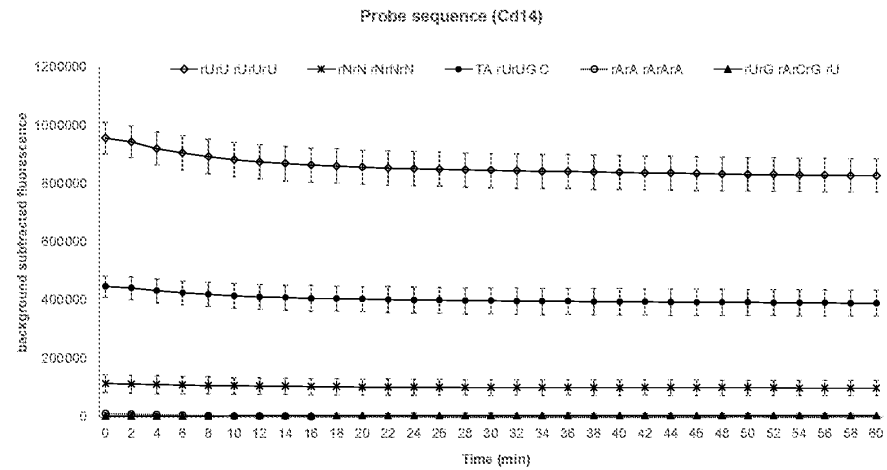
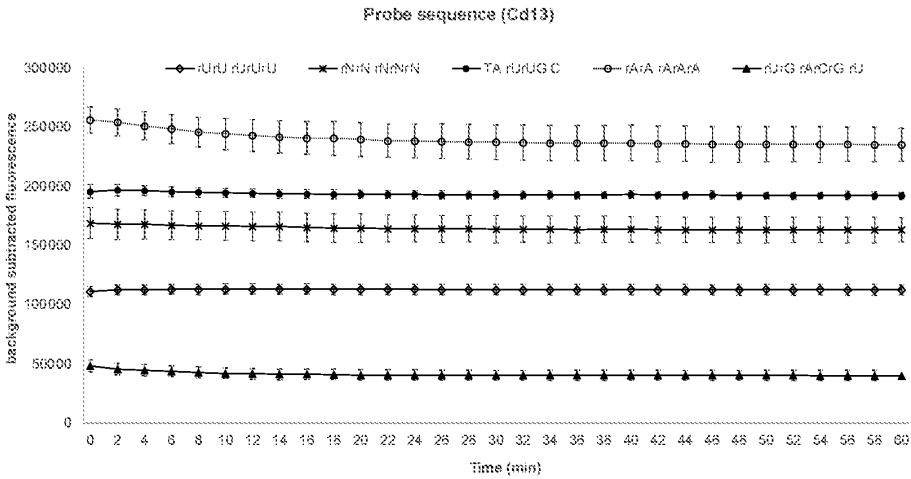


FIGURE 3 - continued

D:



E:

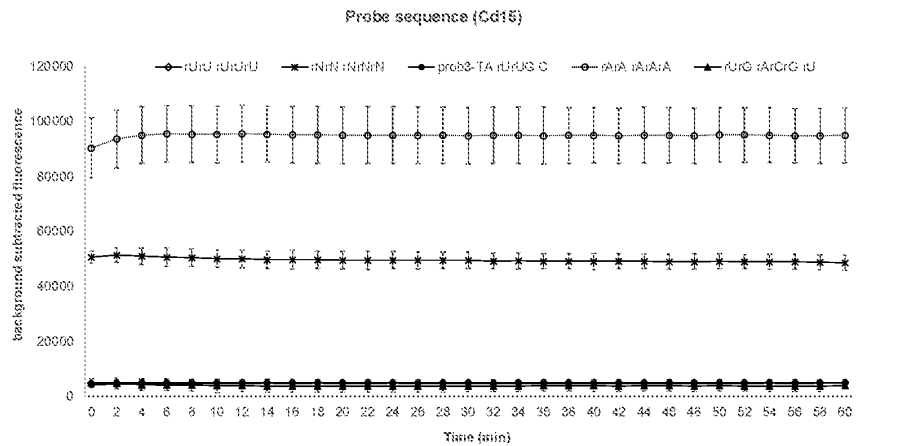


FIGURE 4

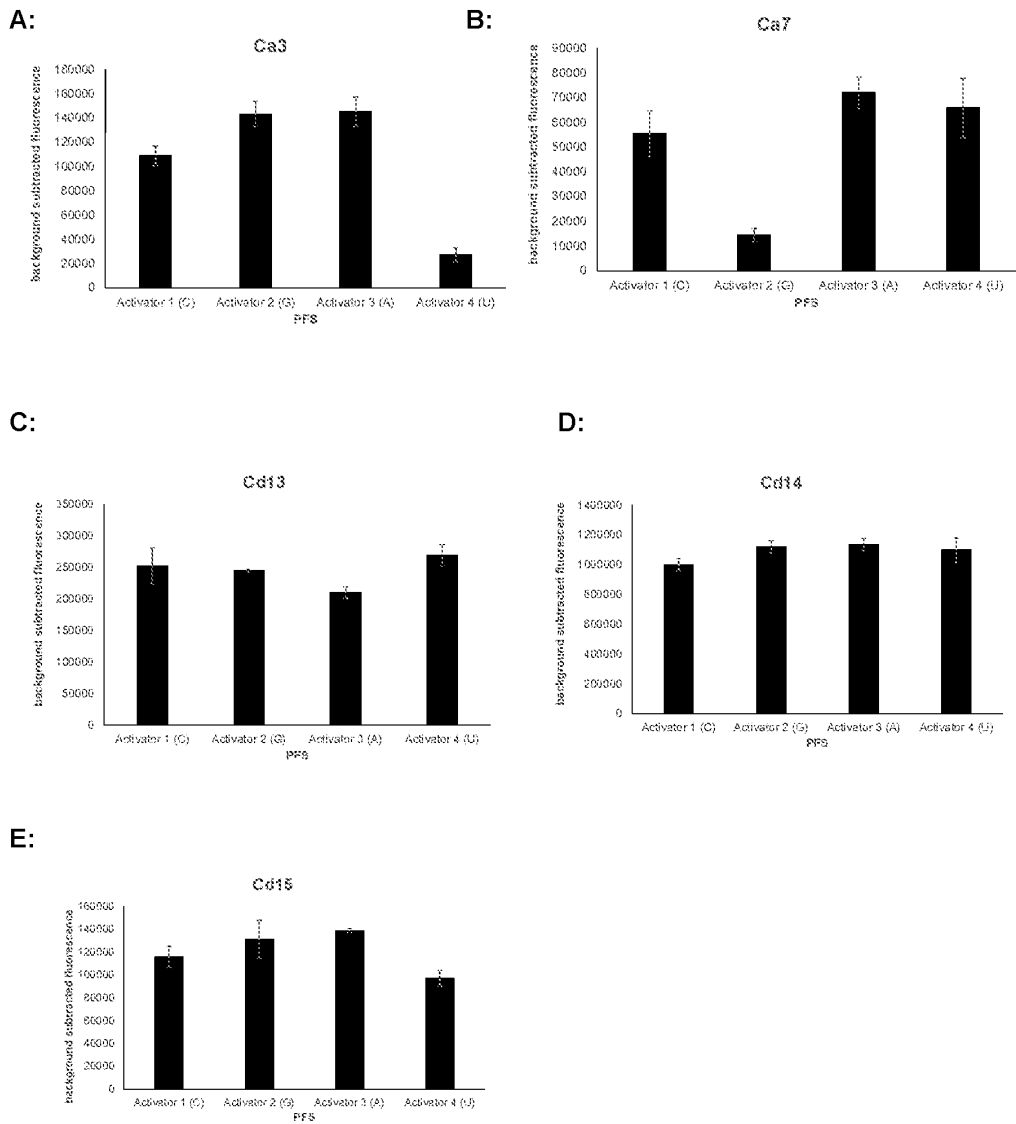


FIGURE 5

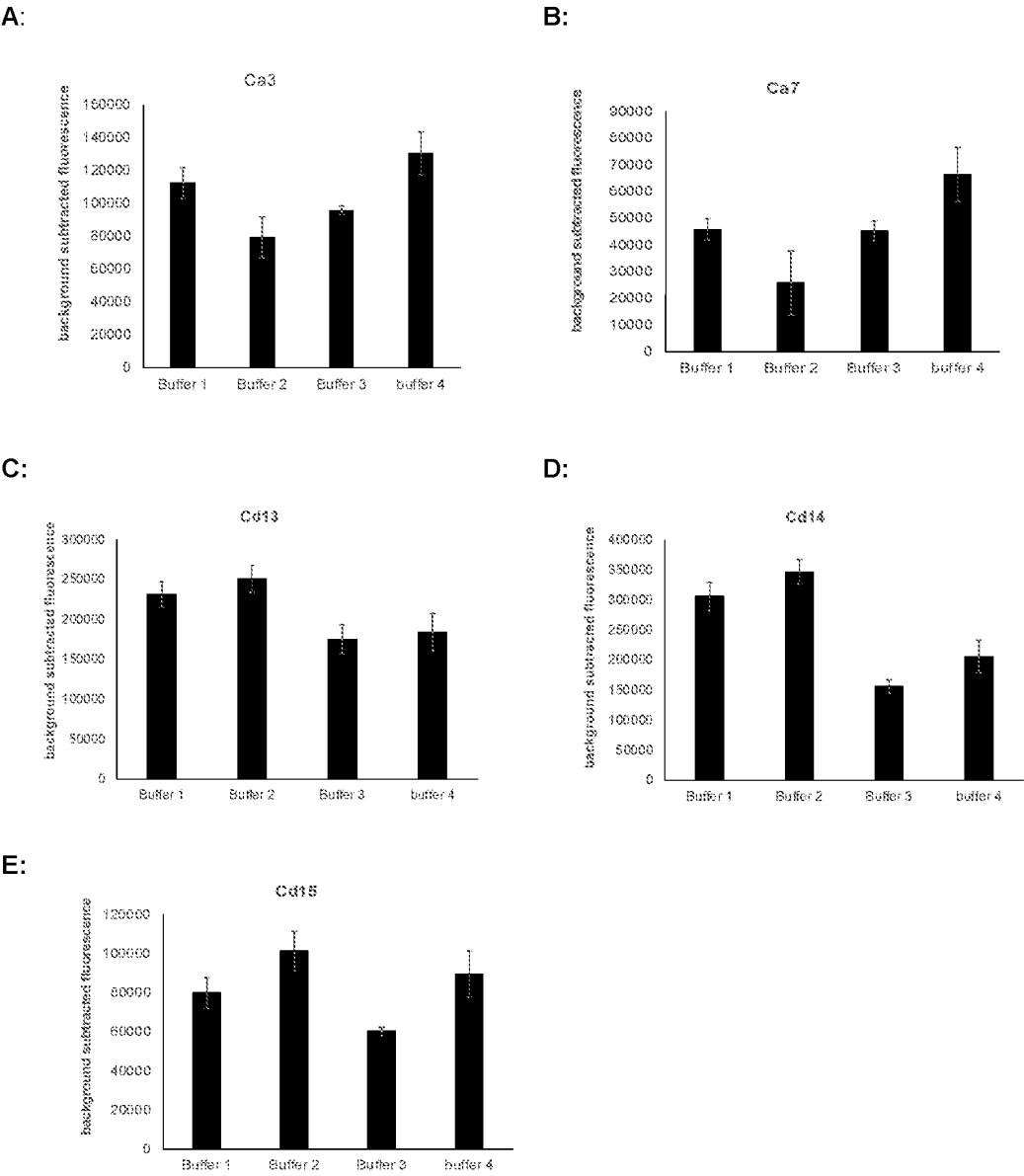


FIGURE 6

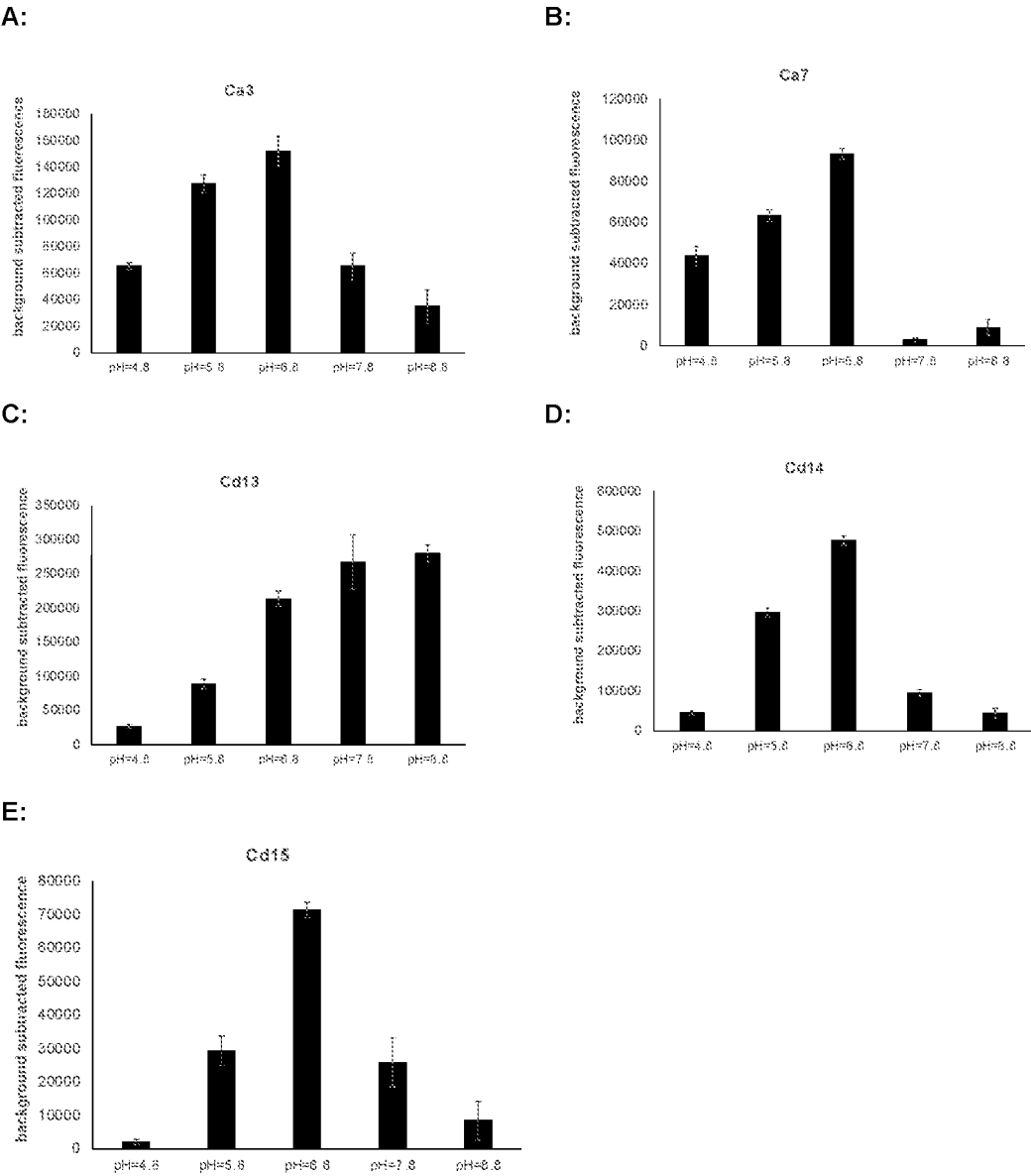
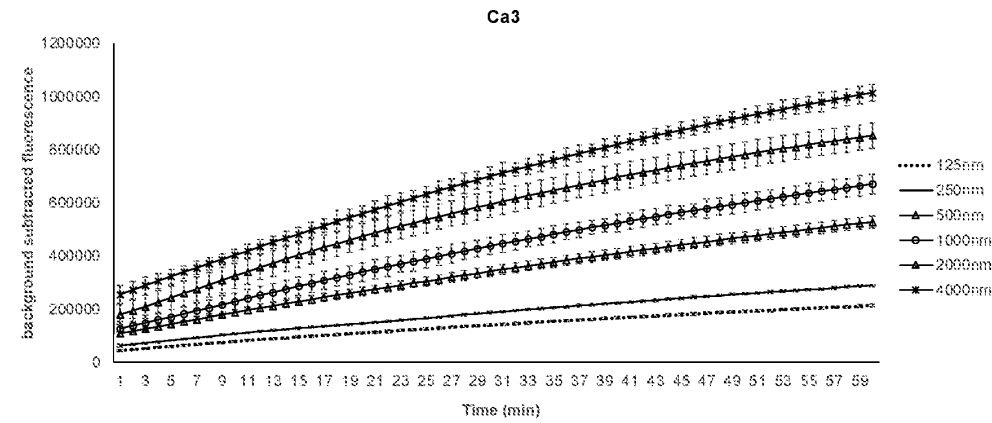


FIGURE 7

A:



B:

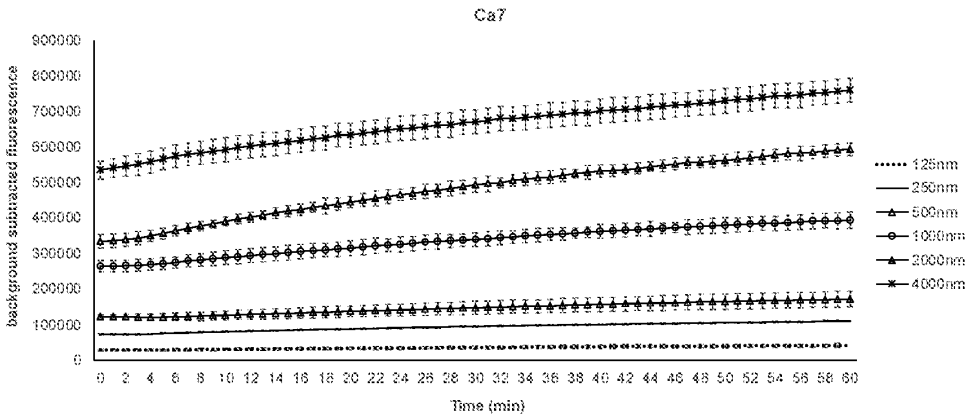
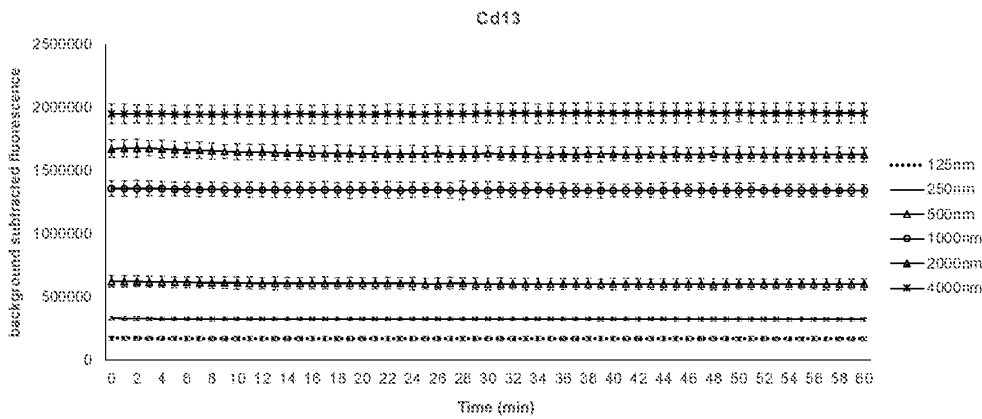


FIGURE 7 - continued

C:



D:

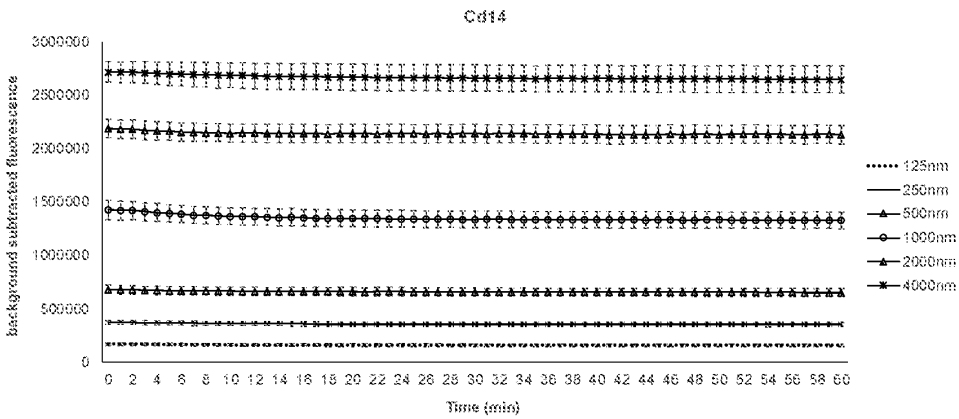


FIGURE 7 - continued

E:

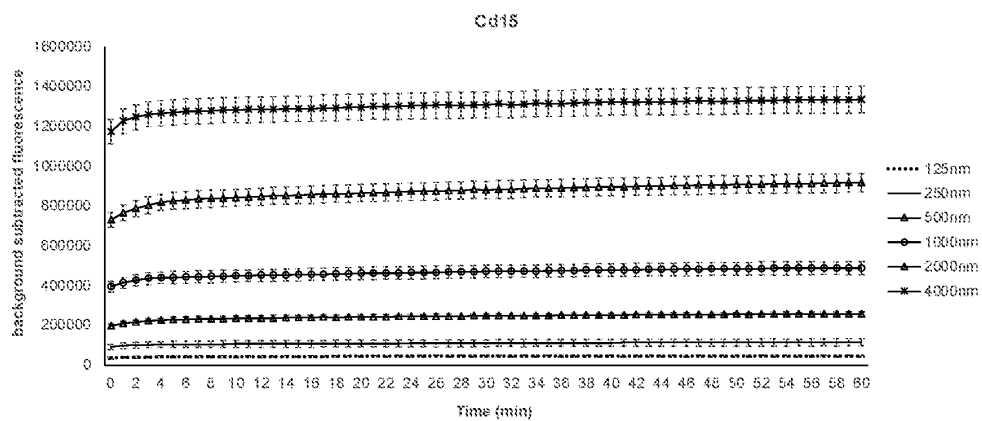
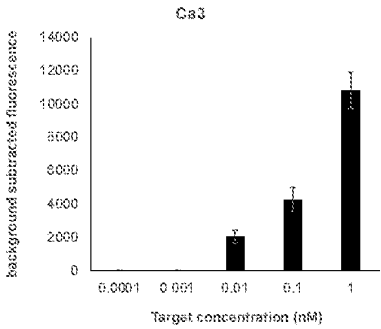
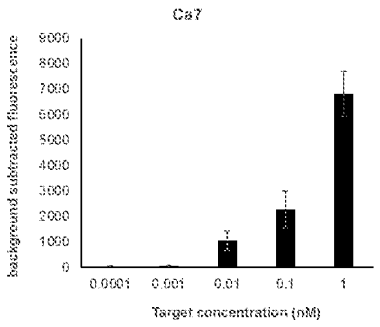


FIGURE 8

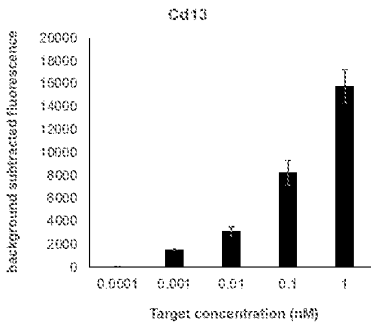
A:



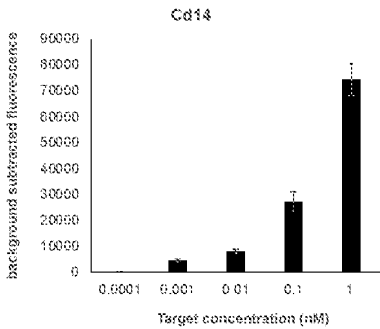
B:



C:



D:



E:

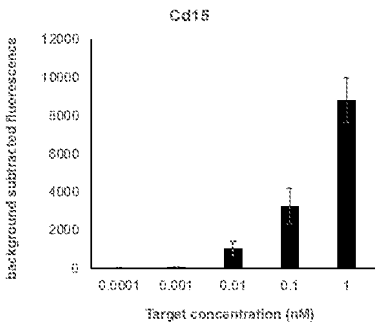


FIGURE 9

Method table. Cleavage reaction conditions.												
Reactions were incubated for 1 h at 37 °C. Fluorescence was measured in 1 or 2 min intervals. Real-time or end-point fluorescence measurements were collected on a microplate reader (Synergy HTX Multi-Mode Reader) or ABI Real-time PCR (Applied Biosystems, CA, USA). All experiments were performed using three independent replicates and results were shown in the graphs as means ± SD (n = 3). Conc.: concentration; NA: not applicable.												
Experiment	Figure	Cas13	Cas (nM)	crRNA type	crRNA (nM)	PFS	Target (nm)	Probe type	Probe (nM)	Buffer	pH	Other
gRNA variants	Fig. 2	Cd13	50 nm	Rev & Dir	25 nM	Mixed	250nm	rUJ rUJrUJ	250 nm	1	7	
gRNA variants	Fig. 2	Cd14	50 nm	Rev & Dir	25 nM	Mixed	250nm	rUJ rUJrUJ	250 nm	1	7	
gRNA variants	Fig. 2	Cd15	50 nm	Rev & Dir	25 nM	Mixed	250nm	rUJ rUJrUJ	250 nm	1	7	
Probe types	Fig. 3A	Ca3	100 nm	NA	50 nM	Mixed	250nm	5 probes	250 nm	1	7	probe types (Table 6)
Probe types	Fig. 3B	Ca7	100 nm	NA	50 nM	Mixed	250nm	5 probes	250 nm	1	7	probe types (Table 6)
Probe types	Fig. 3C	Cd13	100 nm	Rev	50 nM	Mixed	250nm	5 probes	250 nm	1	7	probe types (Table 6)
Probe types	Fig. 3D	Cd14	100 nm	Rev	50 nM	Mixed	250nm	5 probes	250 nm	1	7	probe types (Table 6)
Probe types	Fig. 3E	Cd15	100 nm	Dir	50 nM	Mixed	250nm	5 probes	250 nm	1	7	probe types (Table 6)
PFS Test	Fig. 4A	Ca3	100 nm	NA	50 nM	C, G, A, U	250nm	rN/rN/rN/rN	250 nm	1	7	
PFS Test	Fig. 4B	Ca7	100 nm	NA	50 nM	C, G, A, U	250nm	rN/rN/rN/rN	250 nm	1	7	
PFS Test	Fig. 4C	Cd13	100 nm	Rev	50 nM	C, G, A, U	250nm	rA/rA/rA/rA	250 nm	1	7	
PFS Test	Fig. 4D	Cd14	100 nm	Rev	50 nM	C, G, A, U	250nm	rUJ rUJrUJ	250 nm	1	7	
PFS Test	Fig. 4E	Cd15	100 nm	Dir	50 nM	C, G, A, U	250nm	rA/rA/rA/rA	250 nm	1	7	
Buffer types	Fig. 5A	Ca3	50 nm	NA	25 nM	A	250nm	rN/rN/rN/rN	250 nm	1 to 4	6.8 or 7	buffer types (Table 7)
Buffer types	Fig. 5B	Ca7	50 nm	NA	25 nM	A	250nm	rN/rN/rN/rN	250 nm	1 to 4	6.8 or 7	buffer types (Table 7)
Buffer types	Fig. 5C	Cd13	50 nm	Rev	25 nM	U	250nm	rA/rA/rA/rA	250 nm	1 to 4	6.8 or 7	buffer types (Table 7)
Buffer types	Fig. 5D	Cd14	50 nm	Rev	25 nM	A	250nm	rUJ rUJrUJ	250 nm	1 to 4	6.8 or 7	buffer types (Table 7)
Buffer types	Fig. 5E	Cd15	50 nm	Dir	25 nM	A	250nm	rA/rA/rA/rA	250 nm	1 to 4	6.8 or 7	buffer types (Table 7)
pH range	Fig. 6A	Ca3	50 nm	NA	25 nM	A	250nm	rN/rN/rN/rN	250 nm	4	Range	pH 8 to pH 6.8

FIGURE 9 – continued

pH range	Fig. 6B	Ca7	50 nm	NA	25 nM	A	250nm	rNIN rNINrN	250 nm	4	Range	pH4.8 to pH8.8
pH range	Fig. 6C	Cd13	50 nm	Rev	25 nM	U	250nm	rA/rA/rA/rA	250 nm	2	Range	pH4.8 to pH8.8
pH range	Fig. 6D	Cd14	50 nm	Rev	25 nM	A	250nm	rUU rUUUU	250 nm	2	Range	pH4.8 to pH8.8
pH range	Fig. 6E	Cd15	50 nm	Dir	25 nM	A	250nm	rA/rA/rA/rA	250 nm	2	Range	pH4.8 to pH8.8
Probe Conc.	Fig. 7A	Ca3	50 nm	NA	25 nM	A	250nm	rNIN rNINrN	Range	4	8.8	probe: 125 nM to 4000 nM
Probe Conc.	Fig. 7B	Ca7	50 nm	NA	25 nM	A	250nm	rNIN rNINrN	Range	4	6.8	probe: 125 nM to 4000 nM
Probe Conc.	Fig. 7C	Cd13	50 nm	Rev	25 nM	Mixed	250nm	rA/rA/rA/rA	Range	2	8.8	probe: 125 nM to 4000 nM
Probe Conc.	Fig. 7D	Cd14	50 nm	Rev	25 nM	Mixed	250nm	rUU rUUUU	Range	2	6.8	probe: 125 nM to 4000 nM
Probe Conc.	Fig. 7E	Cd15	50 nm	Dir	25 nM	Mixed	250nm	rA/rA/rA/rA	Range	2	6.8	probe: 125 nM to 4000 nM
Target conc.	Fig. 8A	Ca3	50 nm	NA	25 nM	A	Range	rNIN rNINrN	1000 nM	4	6.8	target: 1nM to 0.0001 nM
Target conc.	Fig. 8B	Ca7	50 nm	NA	25 nM	A	Range	rNIN rNINrN	1000 nM	4	6.8	target: 1nM to 0.0001 nM
Target conc.	Fig. 8C	Cd13	50 nm	Rev	25 nM	Mixed	Range	rA/rA/rA/rA	1000 nM	2	8.8	target: 1nM to 0.0001 nM
Target conc.	Fig. 8D	Cd14	50 nm	Rev	25 nM	Mixed	Range	rUU rUUUU	1000 nM	2	6.8	target: 1nM to 0.0001 nM
Target conc.	Fig. 8E	Cd15	50 nm	Dir	25 nM	Mixed	Range	rA/rA/rA/rA	1000 nM	2	6.8	target: 1nM to 0.0001 nM

FIGURE 10

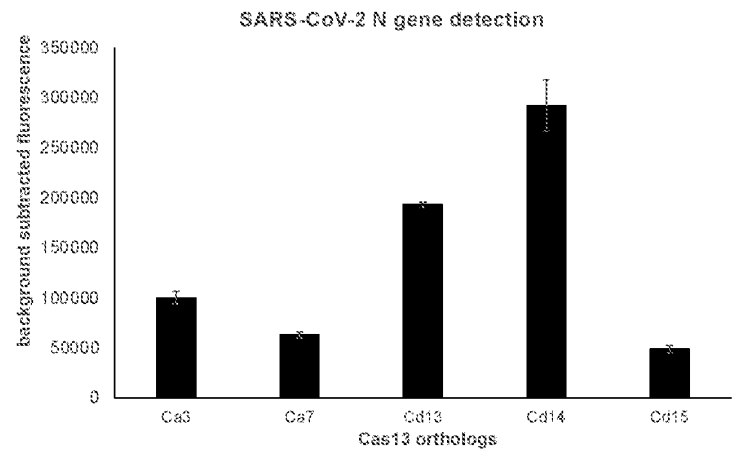
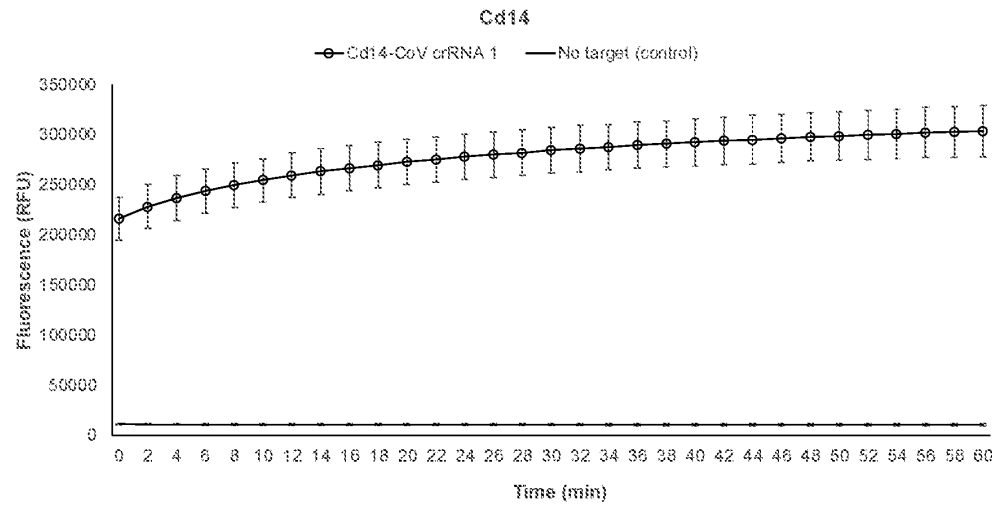


FIGURE 11

A.



B.

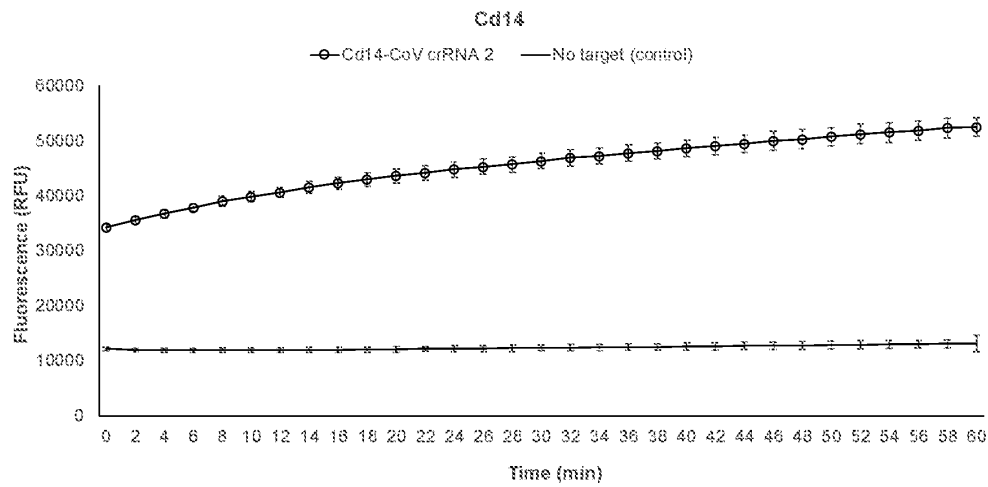


FIGURE 12

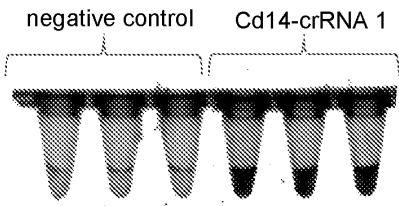


FIGURE 13

