Table S1. Primers used in this study

Primer names	Primer sequences（5’ - 3’）
D117L-T-RNA-F	TAATACGACTCACTATAGGGACAATCGCCAAATATCCCGGAA
D117L-T-RNA-R	GTGGTGAGGCTCAGGTTGTTGTA
D117L-crRNA1-F	GAAATTAATACGACTCACTATAGGG***GATTTAGACTACCCCAAAAACGAAGGGGACTAAAAC***GAGC AAAATCAAAATGCCCAGGA
D117L-crRNA1-R	TCCTGGGCATTTTGATTTTGCTCGTTTTAGTCCCCTTCGTTTTTGGGGTAGTCTAAATCCCCTATAG TGAGTCGTATTAATTTC
D117L-crRNA2-F	GAAATTAATACGACTCACTATAGGG***GATTTAGACTACCCCAAAAACGAAGGGGACTAAAAC***TGAG CAAAATCAAAATGCCCAGG
D117L-crRNA2-R	CCTGGGCATTTTGATTTTGCTCAGTTTTAGTCCCCTTCGTTTTTGGGGTAGTCTAAATCCCCTATAG TGAGTCGTATTAATTTC
D117L-crRNA3-F	GAAATTAATACGACTCACTATAGGG***GATTTAGACTACCCCAAAAACGAAGGGGACTAAAAC***TTATA GTAAACGATGGCAACGAT
D117L-crRNA3-R	ATCGTTGCCATCGTTTACTATAAGTTTTAGTCCCCTTCGTTTTTGGGGTAGTCTAAATCCCCTATAG TGAGTCGTATTAATTTC
RPA-D117L-F1	GAAATTAATACGACTCACTATAGGGACAATCGCCAAATATCCCGGAACAACTGCGATTC
RPA-D117L-R1	AGAATACCGGGAAATGGTGGTGAGGCTCAGGTTG
RPA-D117L-F2	TAATACGACTCACTATAGGGTTTTAGCCCATACAATCGCCAAATATCCCGGAAC
RPA-D117L-R2	CGGGAAATGGTGGTGAGGCTCAGGTTGTTGTACA
PRRSV-UF	TAATACGACTCACTATAGGGGCCCCTGCCCAYCACG
PRRSV-UR	TCGCCCTAATTGAATAGGTGA

PEDV-N-F1	TAATACGACTCACTATAGGGGGGCCGTCGACATGGCTTCTGTCAGTTTTCAGGATCG
PEDV-N-F1	GGGCCGATATTCATTTCCTGTATCGAAGATCTCGTTGATAATTTCAAC
PPV4-F1	TAATACGACTCACTATAGGGCTTTGCTTTGTCCAACGCAGA
PPV4-R1	TAGATGTCCTGGCACAGATACTTGAC
PRV-gC-F1	TAATACGACTCACTATAGGGCGAGACCGAGGGCGTCTACAC
PRV-gC-R1	GCCCATCATCAGCGCCTGC
CSFV-UF	CTGGGTGGTCTAAGTCCTGAGTA
CSFV-UR	GATTCAACTCCATGTGCCATGTA
PCV3-F1	TAATACGACTCACTATAGGGCTGTTATTTTGGATGATTTTTATG
PCV3-R1	CACAGCCGTTACTTCACCC
SIV-HA-F1	AAACCAATGATAGGGCCAA
SIV-HA-R1	TTGCACTACACAGTTACCAC
p72-UF	TGCTCATGGTATCAATCTTATCG
p72-UR	CCACTGGGTTGGTATTCCTC
p72-TaqMan	5′ FAM-TTCCATCAAAGTTCTGCAGCTCTT-TAMRA 3′

Note: T7 promoter sequences are underlined, and LwCas13a binding sequence is bold and italic.

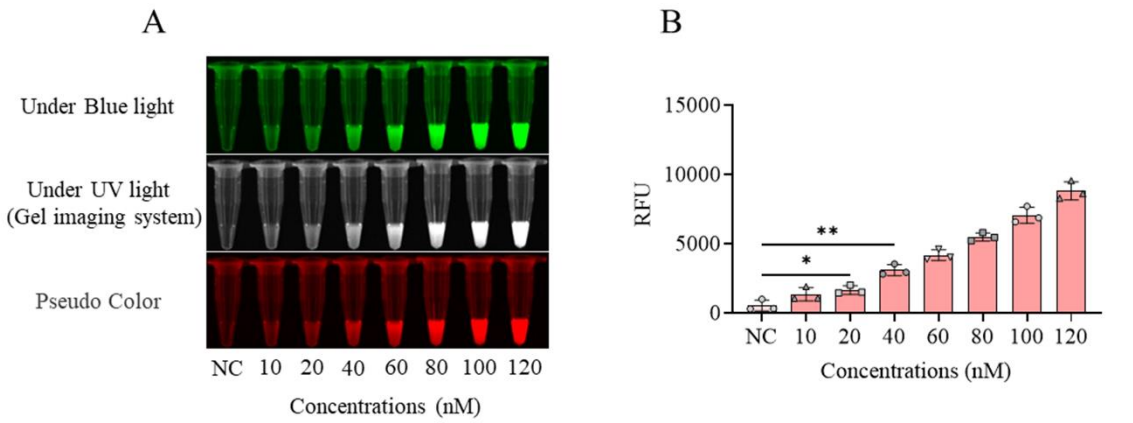

Fig S1

Figure S1. Optimization of RNA probe 5'-6-FAM-ssRNA-BHQ1-3' concentration. A, The blue and ultraviolet light signals mediated by crRNA1 at different concentrations of RNA probe. B, The fluorescence signal intensity mediated by crRNA1 at different probe concentrations by using microplate reader at different concentrations of RNA probe. * P<0.05, * * p<0.01 versus a single no target RNA control (NC) (n=3).

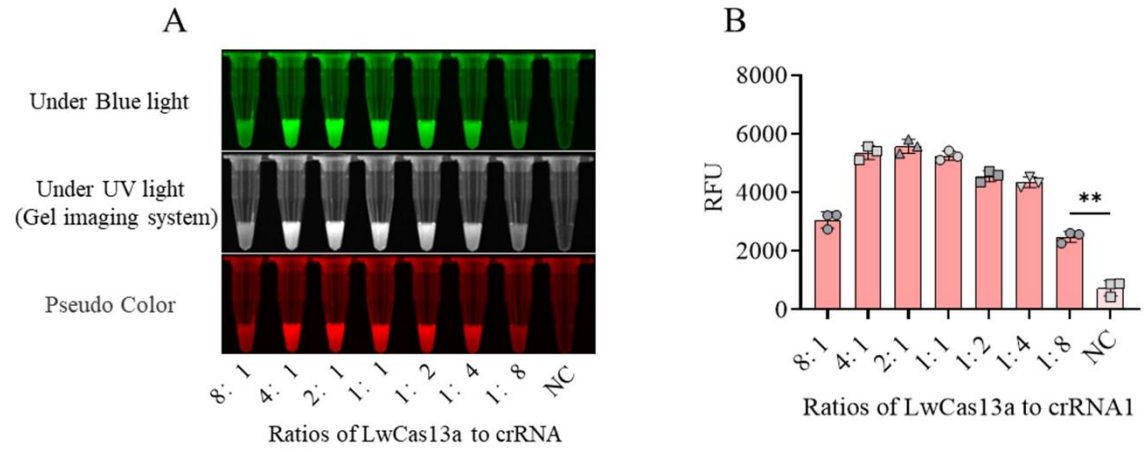

Fig S2

Figure S2. Optimization of the ratio between LwCas13a protein and crRNA1. A, The blue and ultraviolet light signals mediated by crRNA1 at the indicated ratios of LwCas13a : crRNA1. B, The fluorescence signal intensity mediated by crRNA1 at the indicated ratios of LwCas13a : crRNA1. ** P<0.01 versus no target RNA control (NC) (n=3).