

Supplementary

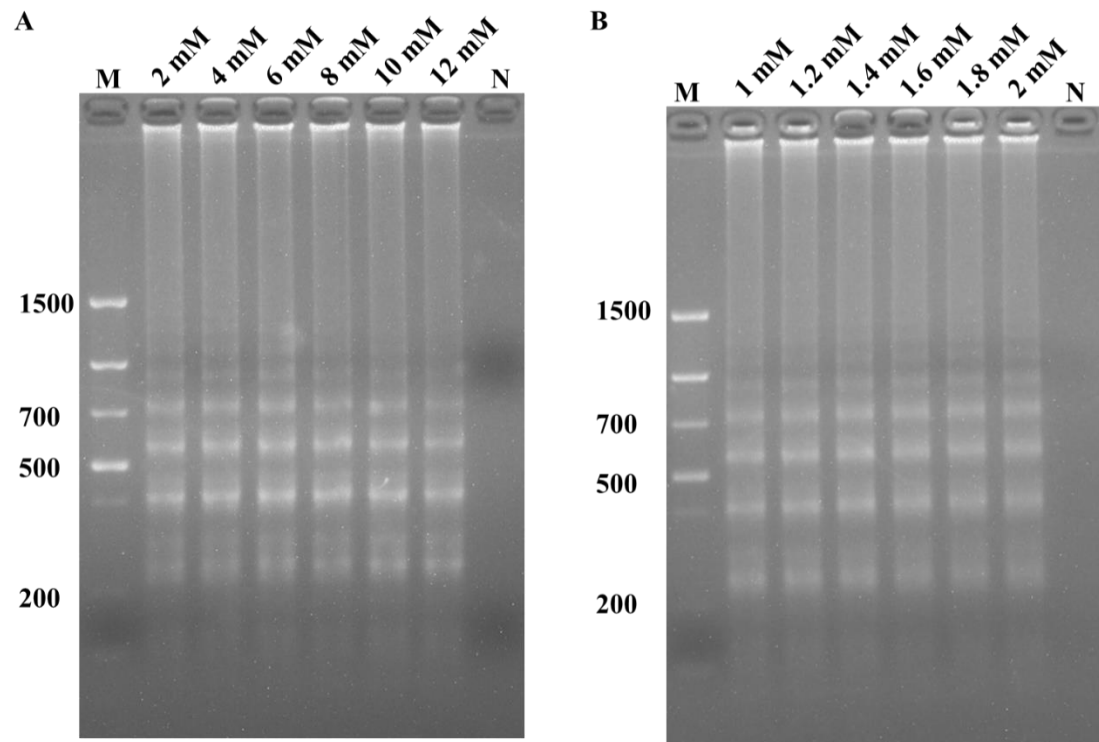


Figure S1 Evaluation of Mg^{2+} and dNTPs in the LAMP reaction.

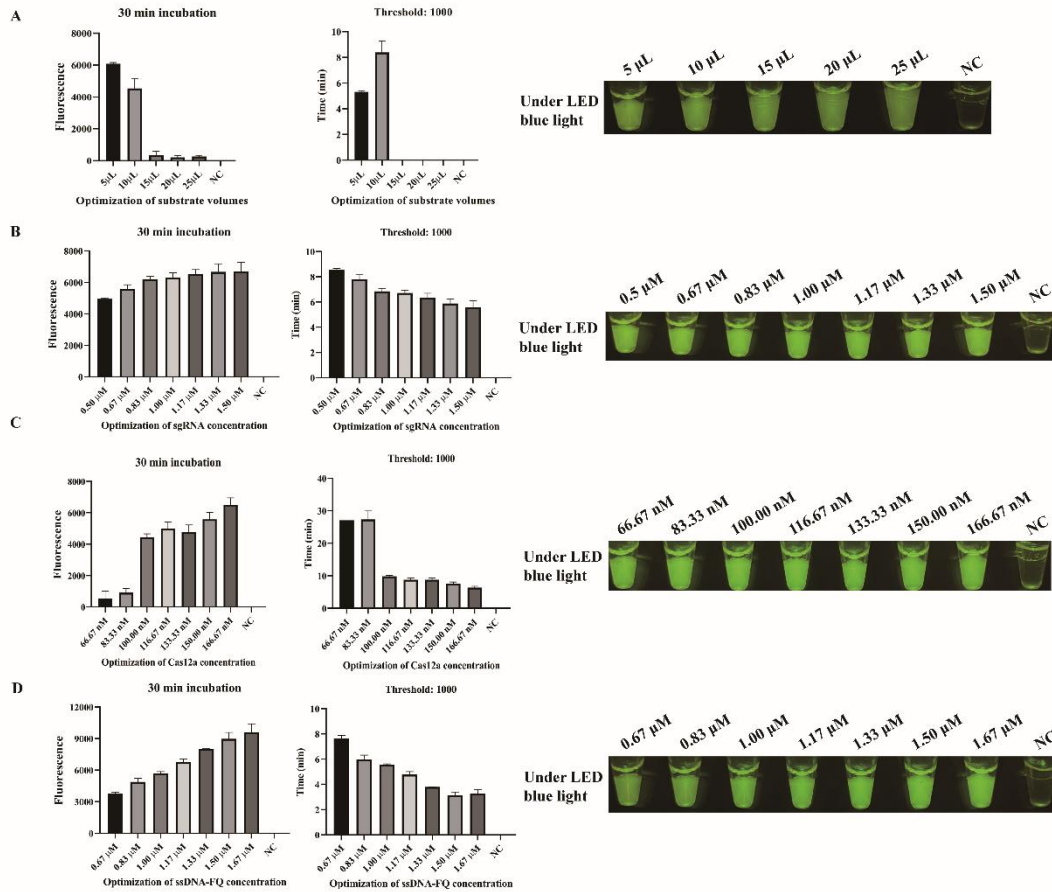


Figure S2 Evaluation of the concentration of sgRNA, Cas12a, the ssDNA-FQ probe, and the substrate volume.

Table S1. Average binding efficiency of ICB.

Initial concentration (CFU/mL)	20 min after capture (CFU/mL)				Difference before and after the capture	Binding efficiency (%)	Average binding efficiency (%)
	1	2	3	Mean value			
8×10^3	1220	1430	1310	1320	7220	84.5	92.4
8×10^2	40	80	70	63.3	790.7	92.6	
8×10^1	0	0	0	0	80	100	

Table S2 The sequence information of all used primers, sgRNAs, and the ssDNA probe

Name	Sequence (5'-3')	Length (bp)
1F3	GCGCAAAATTAAGAATTTGG	23
1B3	GCAGCAAGCAATAAGAAGT	20

1FIP	GCACGAAGTCCTATTTTTTTATCGCTTTTGTTTATGAGGAAATAGGAAAAACA	54
	G	
1BIP	ACAAGAATGCACAAATTTGCCTTTTTTCCATCATGACCACAAGC	45
2F3	GAAAAACAGGCGTTGTGG	18
2B3	CCTCTTCAGCAGGTTGAA	18
2FIP	GCATTCTTGTAAGGCAAAGCATTTTTGGAAATAGCGATAAAAAAATAGGAC	52
2BIP	TGCATGCTTGTTGGTCATGATGTTTTCGCCATTAAAAATTCTGACTTG	46
3F3	TTTGGTTATGAGGTTTATGAGG	22
3B3	GCAGCAAGCAATAAAGAAGT	20
3FIP	CCATATCTGCACGAAGTCCTATTTTTTTTAAATAGGAAAAACAGGCGTT	49
3BIP	ACAAGAATGCACAAATTTGCCTTTTTTCCATCATGACCACAAGC	45
4F3	GGCGAATTTGAAAAAATTCGTC	22
4B3	GCATCCATATCTGCACGA	18
4FIP	TGCGCCACTAATTTTGCAGTACTTTTATCAAATTCATGAAAATCCTGAGC	50
4BIP	GAGGAAATAGGAAAAACAGGCGTTTTTCCTATTTTTTTATCGCTATTTCCCT	52
5F3	GATGATGGCTTCTTCGGATA	20
5B3	TGATATTAAGCATGTCCTGC	22
5FIP	AGCAGCATAAATAGGATCTTTTGCCTTTTTATTGAAGTTATTGGAAGGGGT	51
5BIP	TGTGGCTTTACAAAGCATAGTATCTTTTAGCTCCTATGCTTACAACGT	49
sgRNA1	GAAUUUCUACUGUUGUAGAUCAAGAAUGCACAAAUUGCCUUAU	44
sgRNA2	GAAUUUCUACUGUUGUAGAUUUUUUGCUUUUAUAAGGCAAAU	44
sgRNA3	GAAUUUCUACUGUUGUAGAUCAAGCAAUAAAGAAGUAGUAU	44
sgRNA4	GAAUUUCUACUGUUGUAGAUCCUUUACAAGAAUGCACAAAUUG	44
sgRNA5	GAAUUUCUACUGUUGUAGAUUAAGGCAAAUUGUGCAUUCUUGU	44
sgRNA6	GAAUUUCUACUGUUGUAGAUUUUAUAAGGCAAAUUGUGCAU	44
ssDNA-FQ probe	FAM-TTTTTT-BHQ1	6