

Oligonucleotide Description	Sequence
SARS-CoV2 -1 PRF WT Fwd	5'CTGATGTTCGTaTACAGGGCTTTTG3'
SARS-CoV2 -1 PRF WT Rev	5'TACTAGTGCCTGTGCCGC3'
SARS-CoV -1 PRF Attenuator hairpin Fwd	5'gtctgcggatgcatcaacGTTTTTAAACGGGTTTGCGGTGT AAGTGCAG3'
SARS-CoV -1 PRF Attenuator hairpin Rev	5'tgcatcaagggttcgcggGTCGACGAGGGCCCCGGGG3'
SARS-CoV2 -1 PRF Attenuator hairpin Fwd	5'gtcagctgatgcacaatcGTTTTTAAACGGGTTTGCGGTGT AAGTGCAG3'
SARS-CoV2 -1 PRF Attenuator hairpin Rev	5' tgaagcatgggttcgcggGTCGACGAGGGCCCCGGGG 3'
SARS-CoV -1 PRF Attenuator mutant Fwd	5'ccgacgttctaCGTTTTTAAACGGGTTTGCGGTGTAA G3'
SARS-CoV -1 PRF Attenuator mutant Rev	5'ctgattgcattaaGGGTTCGCGGGTTCGACGA3'
SARS-CoV2 -1 PRF Attenuator mutant Fwd	5'ccgacgccagtCGTTTTTAAACGGGTTTGCGGTGTAA G3'
SARS-Cov2 -1 PRF Attenuator mutant Rev	5'ccgattggagtatGGGTTCGCGGGTTCGACGA3'
SARS-CoV -1 PRF Stem 1 mutant Fwd	5'cccgttttgcacgaGCGGCACAGGCACTAGTA3'
SARS-CoV -1 PRF Stem 1 mutant Rev	5'ctgcacctagactgcAAACCCGTTTAAAAACGTTGATGC 3'
SARS-CoV2 -1 PRF Stem 1 mutant Fwd	5'cccgttttgcacgaGCGGCACAGGCACTAGTA3'
SARS-CoV2 -1 PRF Stem 1 mutant Rev	5'ctgcacctagactgcAAACCCGTTTAAAAACGATTGTGC 3'
SARS-CoV -1 PRF Stem 3 mutant Fwd	5'agtactgatgtcttCTACAGGGCTTTTGATGGATC3'
SARS-CoV -1 PRF Stem 3 mutant Rev	5'agtgttgggcggcACGGTGTAAGACGGGCTG3'
SARS-CoV2 -1 PRF Stem 3 mutant Fwd	5'agtactgatgtcttATACAGGGCTTTTGATGGATCC3'
SARS-CoV2 -1 PRF Stem 3 mutant Rev	5'agtgttgggcggcACGGTGTAAGACGGGCTG3'
SARS-CoV -1 PRF Stem 2 mutant Top	5'tcgacgTTTTTAAACGGGTTTGCGGTGTAAGTGCAa CCaGTCTTACACCGTGCGGCACAGGCACTAGTACT GATGTCGTCTACAGGaCTTTTGATg 3'
SARS-CoV -1 PRF Stem 2 mutant Bottom	5'gatccATCAAAAAGtCCTGTAGACGACATCAGTACTA GTGCCTGTGCCGCACGGTGTAAGAcTGGtTGCACTT ACACCGCAAACCCGTTTAAAAAcg 3'
SARS-CoV2 -1 PRF Stem 2 mutant Top	5'tcgacgTTTTTAAACGGGTTTGCGGTGTAAGTGCAa CCaGTCTTACACCGTGCGGCACAGGCACTAGTACT GATGTCGTATAACAGGaCTTTTGATg 3'
SARS-CoV2 -1 PRF Stem 2 mutant Bottom	5'gatccATCAAAAAGtCCTGTATACGACATCAGTACTA GTGCCTGTGCCGCACGGTGTAAGAcTGGtTGCACTT ACACCGCAAACCCGTTTAAAAAcg 3'

SARS-CoV2 -1 PRF FWD	5'gTTTTTAAACGGGTTTGCGGTGTAAGTGCAGCCC GTCTTACACCGTGCGGCACAGGCACTAGTACTGAT GTCGTATACAGGGCTTTa 3'
SARS-CoV2 -1 PRF REV	5'ctagtAAAGCCCTGTATACGACATCAGTACTAGTGC CTGTGCCGCACGGTGTAAGACGGGCTGCACTTACA CCGCAAACCCGTTTAAAAActgca 3'
SARS-CoV2 0 PRF FWD	5'gTTTAGAAACGGGTTTGCGGTGTAAGTGCAGCC CGTCTTACACCGTGCGGCACAGGCACTAGTACTGA TGTCGTATACAGGGCTTTa 3'
SARS-CoV2 0 PRF REV	5'ctagtAAAGCCCTGTATACGACATCAGTACTAGTGC CTGTGCCGCACGGTGTAAGACGGGCTGCACTTACA CCGCAAACCCGTTTCTAAActgca 3'
SARS-CoV2 STOP FWD	5'gTTTTGAAACGGGTTTGCGGTGTAAGTGCAGCCC GTCTTACACCGTGCGGCACAGGCACTAGTACTGAT GTCGTATACAGGGCTTTTa 3'
SARS-CoV2 STOP REV	5'ctagtAAAAGCCCTGTATACGACATCAGTACTAGT GCCTGTGCCGCACGGTGTAAGACGGGCTGCACTTA CACCGCAAACCCGTTTCAAAAActgca 3'

Supplementary Table 1. Synthetic oligonucleotides used in this study.

Plasmid	Description
pJD2257	Modified pSGDluc (dual luciferase with inteins) Readthrough control
pJD2359	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV -1 PRF insert
pJD2514	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV-2 -1 PRF insert
pJD2515	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV silent slippery site mutant insert
pJD2516	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV-2 silent slippery site mutant insert
pJD2517	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV attenuator hairpin and -1 PRF insert
pJD2518	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV disrupted attenuator hairpin and -1 PRF insert
pJD2519	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV2 attenuator hairpin and -1 PRF insert
pJD2520	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV-2 disrupted attenuator hairpin and -1 PRF insert
pJD2521	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV -1 PRF insert containing silent mutations in Stem 1
pJD2522	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV -1 PRF insert containing silent mutations in Stem 2
pJD2523	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV -1 PRF insert containing silent mutations in Stem 3
pJD2524	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV-2 -1 PRF insert containing silent mutations in Stem 1
pJD2525	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV-2 -1 PRF insert containing silent mutations in Stem 2
pJD2526	Modified pSGDluc (dual luciferase with inteins) with SARS-CoV-2 -1PRF insert containing silent mutations in Stem 3
DTO20	pISO plasmid modified with insert containing <i>Renilla</i> luciferase and pMLuc1 multiple cloning site
DTO20-1FSWu	DTO20 with SARS-CoV-2 -1PRF insert
DTO20-0FSWu	DTO with SARS-CoV-2 0 PRF insert
DTO20-STOPWu	DTO with SARS-CoV-2 -1PRF insert modified with stop codon in the slippery sequence

Supplementary Table 2. Plasmids used in this study.