

Primers and probes sequences for the 2019 novel coronavirus detection by RT-qPCR

Sequences published by WHO

Target Gene	Oligo Name	Sequence ^a	Concentration ^b
RdRP gene	RdRp_SARSr-F	GTGARATGGTCATGTGTGGCGG	Use 600 nM per reaction.
	RdRp_SARSr-P2	FAM-CAGGTGGAACCTCATCAGGAGATGC-BBQ	Specific for 2019-nCoV, will not detect SARS-CoV. Use 100 nM per reaction and mix with P1.
	RdRP_SARSr-P1	FAM-CCAGGTGGWACRTCATCMGGTGATGC-BBQ	Pan Sarbeco-Probe will detect 2019-nCoV, SARS-CoV and bat-SARS-related CoVs. Use 100 nM per reaction and mix with P2.
	RdRp_SARSr-R	CARATGTAAASACACTATTAGCATA	Use 800 nM per reaction.
E gene	E_Sarbeco_F	ACAGGTACGTTAATAGTTAATAGCGT	Use 400 nm per reaction.
	E_Sarbeco_P1	FAM-ACACTAGCCATCCTTACTGCGCTTCG-BBQ	Use 200 nm per reaction.
	E_Sarbeco_R	ATATTGCAGCAGTACGCACACA	Use 400 nm per reaction.
N gene	N_Sarbeco_F	CACATTGGCACCCGCAATC	Use 600 nm per reaction.
	N_Sarbeco_P	FAM-ACTTCCTCAAGGAACAACATTGCCA-BBQ	Use 200 nm per reaction.
	N_Sarbeco_R	GAGGAACGAGAAGAGGCTTG	Use 800 nm per reaction.

^a W is A/T; R is G/A; M is A/C; S is G/C. FAM: 6-carboxyfluorescein; BBQ: blackberry quencher.

^b Optimized concentrations are given in nanomol per litre (nM) based on the final reaction mix, e.g. 1.5 µL of a 10 µM primer stock solution per 25 µL total reaction volume yields a final concentration of 600 nM as indicated in the table.