

<b>Supplementary table 1. Accuracy of validation controls</b>			
<b>Respiratory Viruses</b>	<b>SARS-CoV-2</b>	<b>RSV</b>	<b>Flu A/ B</b>
RSV A2 cpts-248		Positive	
SARS-CoV-2 (USA-WA1/2020)	Positive		
Influenza A virus (H3N2) (A/Wisconsin/67/2005)			Positive
Influenza B virus (B/Virginia/ATCC4/2009)			Positive
Influenza A virus (H1N1) strain A/PR/8/34 (VR-95DQ)			Positive
RSV A2 (VR-1540DQ)		Positive	
SARs CoV2 (MN908947.3 Wuhan-Hu-1)	Positive		

<b>Supplementary table 2. Precision and Repeatability of Taqman SARS-CoV2, Flu A/B, RSV multiplex assays</b>						
<b>Intra-run</b>	<b>1st run</b>	<b>2nd run</b>	<b>3rd run</b>	<b>SDV</b>	<b>Mean</b>	<b>CV%</b>
SARS-CoV-2	21.9	21.8	21.8	0.06	21.8	0.26
Influenza A/B	20.3	20.1	20.2	0.10	20.2	0.50
RSV	20.5	20.2	20.3	0.15	20.3	0.75
<b>Inter-run</b>	<b>1st run</b>	<b>2nd run</b>	<b>3rd run</b>	<b>SDV</b>	<b>Mean</b>	<b>CV%</b>
SARS-CoV-2	20.5	20.2	20.3	0.15	20.3	0.75
Influenza A/B	20.5	20.2	20.3	0.15	20.3	0.75
RSV	20.5	20.2	20.3	0.15	20.3	0.75

**Supplementary 3. Concordance of Co-infection detection**

Expected results				Concordant
Sample no.	SARS-CoV-2	Influenza A/B	RSV	Yes/No
PT 1	Positive	Positive	Positive	Yes
PT 2	Positive	Positive	Negative	Yes
PT 3	Positive	Positive	Negative	Yes
PT 4	Positive	Positive	Negative	Yes
PT 5	Positive	Negative	Positive	Yes
PT 6	Positive	Positive	Positive	Yes
PT 7	Positive	Positive	Positive	Yes
PT 8	Positive	Negative	Positive	Yes
PT 9	Positive	Positive	Negative	Yes
PT 10	Positive	Positive	Negative	Yes
PT 11	Positive	Positive	Positive	Yes
PT 12	Positive	Positive	Negative	Yes
PT 13	Positive	Positive	Positive	Yes
PT 14	Positive	Positive	Positive	Yes
PT 15	Positive	Negative	Positive	Yes
Spk NP 1	Positive	Positive	Positive	Yes
Spk NP 2	Positive	Positive	Positive	Yes
Spk NP 3	Positive	Positive	Positive	Yes
Spk NP 4	Positive	Positive	Positive	Yes
Spk NP 5	Positive	Positive	Positive	Yes
Spk NP 6	Positive	Positive	Positive	Yes
Spk NP 7	Positive	Positive	Positive	Yes
Spk NP 8	Positive	Positive	Positive	Yes
Spk NP 9	Positive	Positive	Positive	Yes
Spk NP 10	Positive	Positive	Positive	Yes
Spk NP 11	Positive	Positive	Positive	Yes
Spk NP 12	Positive	Positive	Positive	Yes
Spk NP 13	Positive	Positive	Positive	Yes
Spk NP 14	Positive	Positive	Positive	Yes
Spk NP 15	Positive	Positive	Positive	Yes
Spk NP 16	Positive	Positive	Positive	Yes
Spk NP 17	Positive	Positive	Positive	Yes
Spk NP 18	Positive	Positive	Positive	Yes
Spk NP 19	Positive	Positive	Positive	Yes
Spk NP 20	Positive	Positive	Positive	Yes
SPK SL 1	Positive	Positive	Positive	Yes
SPK SL 2	Positive	Positive	Positive	Yes
SPK SL 3	Positive	Positive	Positive	Yes
SPK SL 4	Positive	Positive	Positive	Yes
SPK SL 5	Positive	Positive	Positive	Yes
SPK SL 6	Positive	Positive	Positive	Yes
SPK SL 7	Positive	Positive	Positive	Yes
SPK SL 8	Positive	Positive	Positive	Yes
SPK SL 9	Positive	Positive	Positive	Yes
SPK SL 10	Positive	Positive	Positive	Yes
SPK SL 11	Positive	Positive	Positive	Yes
SPK SL 12	Positive	Positive	Positive	Yes

SPK SL 13	Positive	Positive	Positive	Yes
SPK SL 14	Positive	Positive	Positive	Yes
SPK SL 15	Positive	Positive	Positive	Yes
SPK SL 16	Positive	Positive	Positive	Yes

PT: Patients sample

SPK NP: Spiked Nasopharyngeal sample

SPK SL: Spiked Saliva sample