

Summary of article using Seegene COVID-19 assay

Accurate COVID-19 testing is critical for reducing the spread of SARS-CoV-2 and for appropriate patient care. Seegene is committed to continuously develop and support effective tools for the fight against COVID-19 pandemic.

Seegene COVID-19 assay targeting multiple genes in one tube shows excellent analytical and clinical performances

Independent SARS-CoV-2 molecular assay evaluation conducted by FIND (1st round)

Company	Product name	Gene target	Verified LOD (copies/reaction)	Avg Ct	Clinical sensitivity (50 positives)	Clinical specificity (100 negatives)
Seegene	Allplex™ 2019-nCoV Assay	E	1-10	33.3	100%	100%
		N	1-10	36.74	100%	100%
		RdRP	1-10	34.73	100%	100%
altona Diagnostics	RealStar® SARS-CoV-2 RT-PCR Kit 1.0	E	1 - 10	35.45	92%	100%
		S	1 - 10	35.99	92%	100%
bioMérieux SA	ARGENE® SARS-COV-2 R-GENE®	N	10 - 50	36.44	100%	100%
		RdRP	10 - 50	32.44	96%	100%
Atila BioSystems Inc.	Atila iAMP COVID-19 Detection (isothermal detection)	ORF1ab	50 - 100	NA	100%	99%
		N	1 - 10	NA	100%	100%
Sansure Biotech Inc.	Novel Coronavirus (2019-nCoV) Nucleic Acid Diagnostic Kit (PCR-Fluorescence Probing)	ORF1	10 - 50	35.16	100%	100%
		N	10 - 50	34.96	100%	95%
SD Biosensor Inc.	STANDARD M nCoV Real-Time Detection Kit	E	1 - 10	37.43	100%	97%
		ORF1	1 - 10	36.99	100%	99%
Boditech Med. Inc.	ExAmplar COVID-19 real-time PCR kit (L)	E	10 - 50	34.9	100%	100%
		RdRP	50 - 100	33.46	90%	100%
CerTest Biotech S.L.	VIASURE SARS-CoV-2 Real Time PCR Detection Kit	ORF1ab	10 - 50	35.16	98%	100%
		N	1 - 10	35.46	100%	100%
GeneFirst Ltd	The Novel Coronavirus (2019-nCoV) Nucleic Acid Test Kit	ORF1	1 - 10	35.45	100%	99%
		N	1 - 10	36.72	98%	100%
KH Medical Co. Ltd	RADI COVID-19 Detection Kit	S	1 - 10	37.94	100%	100%
		RdRP	10 - 50	36.74	100%	100%
Bioneer Corporation	AccuPower® SARS-CoV-2 Real-Time RT-PCR Kit	E	10 - 50	35.85	100%	100%
		RdRP	10 - 50	36.18	100%	100%
ThermoFisher Scientific	TaqPath™ COVID-19 CE-IVD RT-PCR Kit	ORF1ab S N	1 - 10	NA	100%	100%
EUROIMMUN AG	EURORealTime SARS-CoV-2	ORF1ab/ N	1 - 10	37.88	100%	98%
Primerdesign Ltd	Coronavirus COVID-19 genisig® Real-Time PCR assay	RdRP	1 - 10	36.7	100%	100%
R - Biopharm AG	RIDA®GENE SARS-CoV-2 RUO	E	1 - 10	37.99	100%	100%
Tib Molbiol/ Roche Diagnostics	ModularDx Kit SARS-CoV (COVID19) E-gene (Tib Molbiol) + LightCycler Multiplex RNA Virus Master (Roche)	E	1 - 10	33.34	100%	100%

Minimizing a false negative targeting multiple genes in a tube²⁾

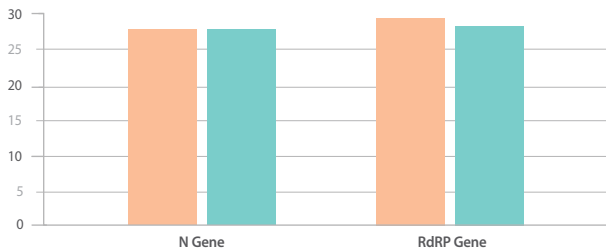
		GeneFinder COVID-19 plus		
		Positive	Negative	Total
Seegene COVID-19 assay	Positive	22	3	25
	Negative	0	16	16
	Total	22	19	41

Seegene COVID-19 assay and the GeneFinder COVID-19 plus shows an overall agreement of 92.7%

“ Seegene COVID-19 assay had **100% agreement** with the diagnosis* of the infectious disease specialist ”

* Diagnosis on the basis of epidemiological exposure, clinical and laboratory examination, and chest computed tomography findings

Providing reliable results even in the extraction free³⁾



For 17 samples stored in UTM

RNA extraction (orange)
RNA extraction free (teal)

Seegene COVID-19 assay shows comparable Ct values of the SARS-CoV-2 target genes regardless of RNA extraction

Reference

1. INFORMATION FROM WWW.FINDDX.ORG/COVID-19/SARSCOV2-EVAL-MOLECULAR/MOLECULAR-EVAL-RESULTS/
2. Eric Farfour *et al.* European Journal of Clinical Microbiology & Infectious Diseases (2020)
3. Alexis Danylo *et al.* bioRxiv (2020)
4. Neher Richard A. *et al.* Swiss Medical Weekly (2020)



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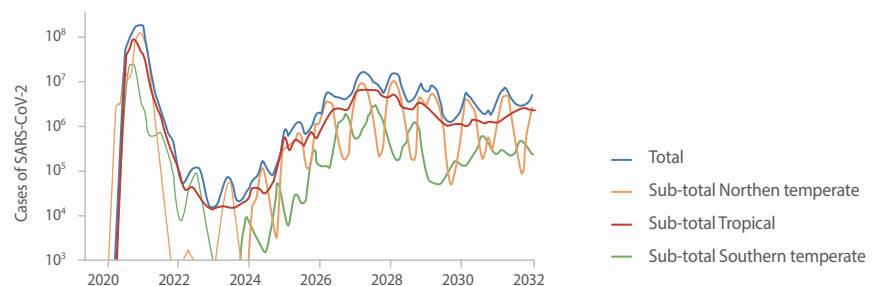
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For Your Information

Simulation on the scenario for SARS-CoV-2 pandemics



The model using data regarding seasonal variation of the four endemic coronaviruses (229E, HKU1, NL63, OC43) with Allplex™ Respiratory Panel 3, predicts that SARS-CoV-2 could develop into an endemic seasonal CoV