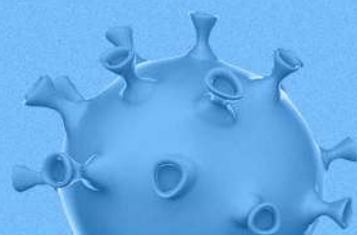




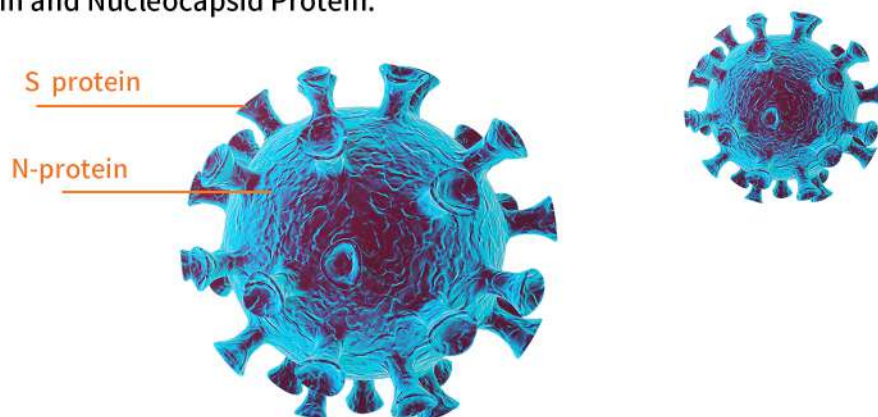
COVID-19 Antigen Rapid Test Cassette



Hangzhou Clongene Biotech Co., Ltd.
en.clongene.com

COVID-19 & SARS-CoV-2

COVID-19 is an acute respiratory infectious disease caused by novel coronavirus (SARS-CoV-2), and people are generally susceptible. Based on the current epidemiological investigation, the incubation period is 1 to 14 days, mostly 3 to 7 days. Novel coronavirus includes four typical structural proteins: Spike Protein, Envelope Protein, Membrane Protein and Nucleocapsid Protein.



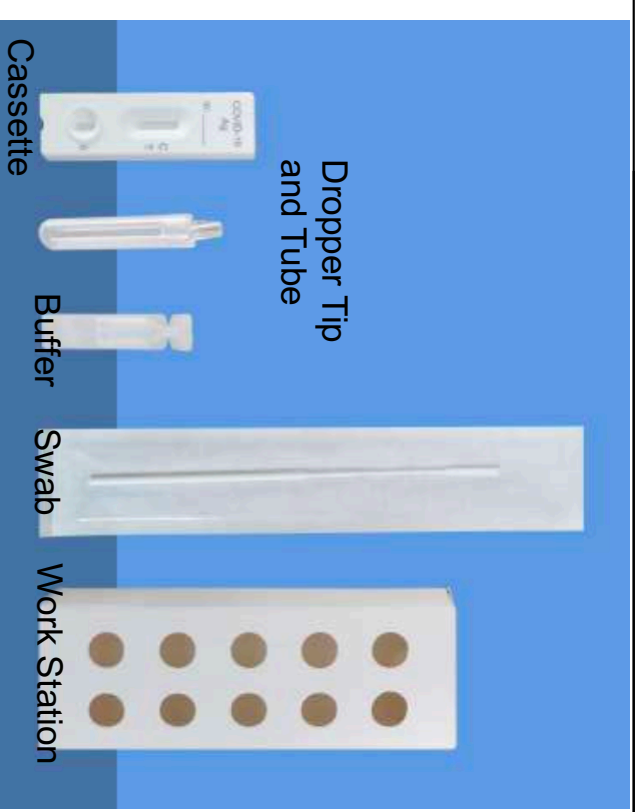
Nucleocapsid (N) protein is the most abundant protein with highly conserved in SARS-CoV-2. N protein is used as the core raw material of rapid diagnostic reagent for immunology in the market.

Clongene has developed the COVID-19 Antigen Rapid Test Cassette. The COVID-19 Antigen Rapid Test is a lateral flow immunoassay intended for the qualitative detection SARS-CoV-2 nucleocapsid antigens in nasopharyngeal swab and oropharyngeal swab from individuals who are suspected of COVID-19 by their healthcare provider.



SARS-COV-2 Antigen Rapid Test Kit

The COVID-19 Antigen Rapid Test is a lateral flow immunoassay based on the principle of the double-antibody sandwich technique. If the specimen contains SARS-COV-2 antigen, a colored test line (T) would be visible in the result window. Absence of the T line suggests a negative result. The control line (C) is used for procedural control, and should always appear if the test procedure is performed properly.



Include: 25 Test Kit, 25 pcs/box
Export Carton: 64x34x55cm
Weight: 17kg
Include: 50 box, 1000pcs
Color box Size: 268x124x65mm

ICOV5002-100596



Work Station



Test Cassette



Extraction reagents



Sterilized Swab



Extraction Tube &
Dropper Tip

Product Features



CE Marked



Instant result at 15 minutes



Easy to collect samples



Results are clearly visible

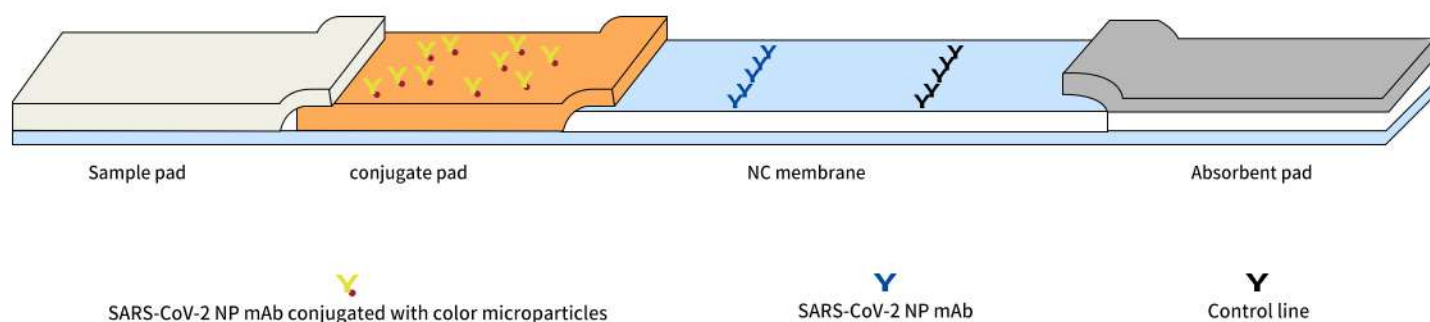


No equipment required



Suitable for large-scale rapid screening

Principle

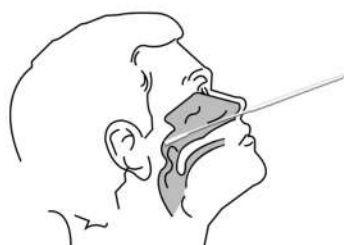


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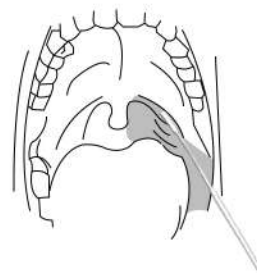
Specimens

The detect specimens include nasopharyngeal swab and oropharyngeal swab.

Nasopharyngeal swab



Oropharyngeal swab



Inadequate specimen collection, improper specimen handling and/or transport may yield false results; therefore, training in specimen collection is highly recommended due to the importance of specimen quality to obtain accurate test results.

Test Procedure

Take nasopharyngeal swab for example.

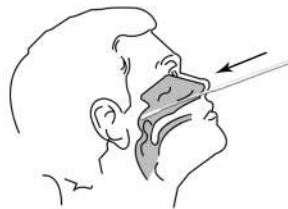
1

Put an extraction tube on the work station. Add all of the extraction reagent into an extraction tube.



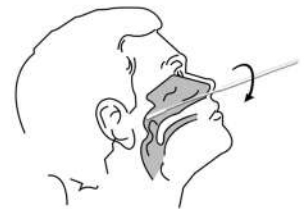
2

Tilt patient's head back about 70°. Insert sterilized swab through the nostril parallel to the palate.



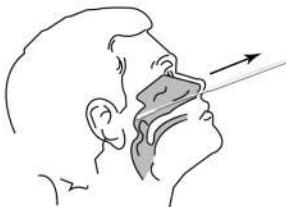
3

Gently rub and roll the swab, and leave swab in place for several seconds to absorb secretions.



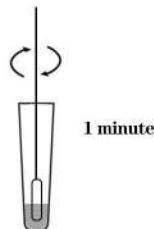
4

Slowly remove swab while rotating it.



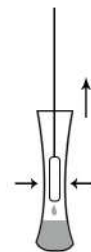
5

Insert the swab specimen into the extraction tube. Roll the swab at least 5 times and leave the swab in the extraction tube for one minute.



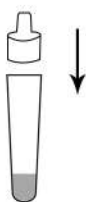
6

Remove the swab while squeezing the sides of the tube to extract the liquid from the swab.



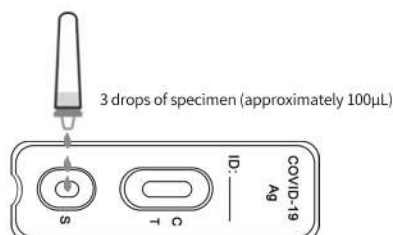
7

Cover the extraction tube with a dropper tip tightly.



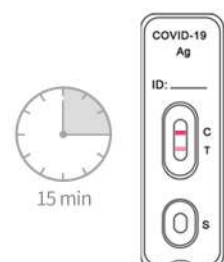
8

Transfer 3 drops (approximately 100μL) to the specimen well of the test cassette.

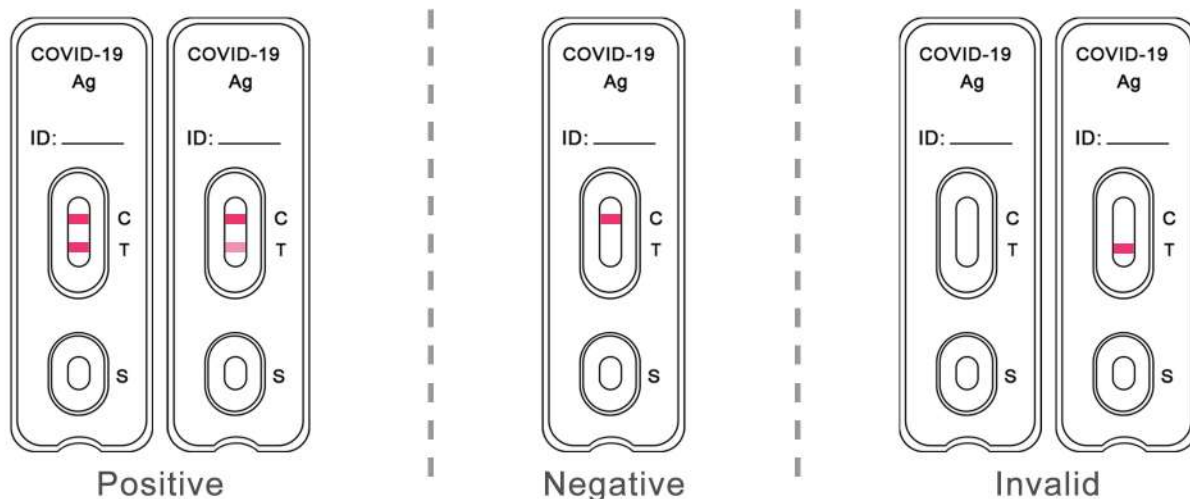


9

Interpret the test results at 15 minutes. Do not read results after 20 minutes.



Interpretation of Results



Performance Characteristics

Clinical Performance

285 nasopharyngeal swabs were detected by COVID-19 Antigen Rapid Test and the RT-PCR.

COVID-19 Antigen		RT-PCR		Total
		Positive	Negative	
CLUNGENE [®]	Positive	64	0	64
	Negative	6	215	221
Total		70	215	285

Sensitivity (PPA)= 91.4% (64/70), (95%CI: 82.5% ~ 96.0%)

Specificity (NPA)= 100% (215/215), (95%CI: 98.2% ~ 100%)

The 6 discordant specimens had Ct values of 34, 36, 35.5, 34, 35, 33

The PPA is 98.5% (64/65) (95%CI: 91.8% ~ 99.7%) with specimens of a Ct count ≤ 33



Limit of Detection (Analytical Sensitivity)

The study used cultured SARS-CoV-2 virus, which is β -propiolactone and heat inactivated and spiked into nasopharyngeal swab specimen. The Limit of Detection (LoD) is $5 \times 10^{2.67}$ TCID₅₀/mL.

Cross Reactivity (Analytical Specificity)

We have evaluated 32 commensal and pathogenic microorganisms that may be present in the nasal cavity and no cross-reactivity was observed.

High-dose Hook Effect

The COVID-19 Antigen Rapid Test was tested up to $1.0 \times 10^{5.67}$ TCID₅₀/mL of inactivated SARS-CoV-2 and no high-dose hook effect was observed.

