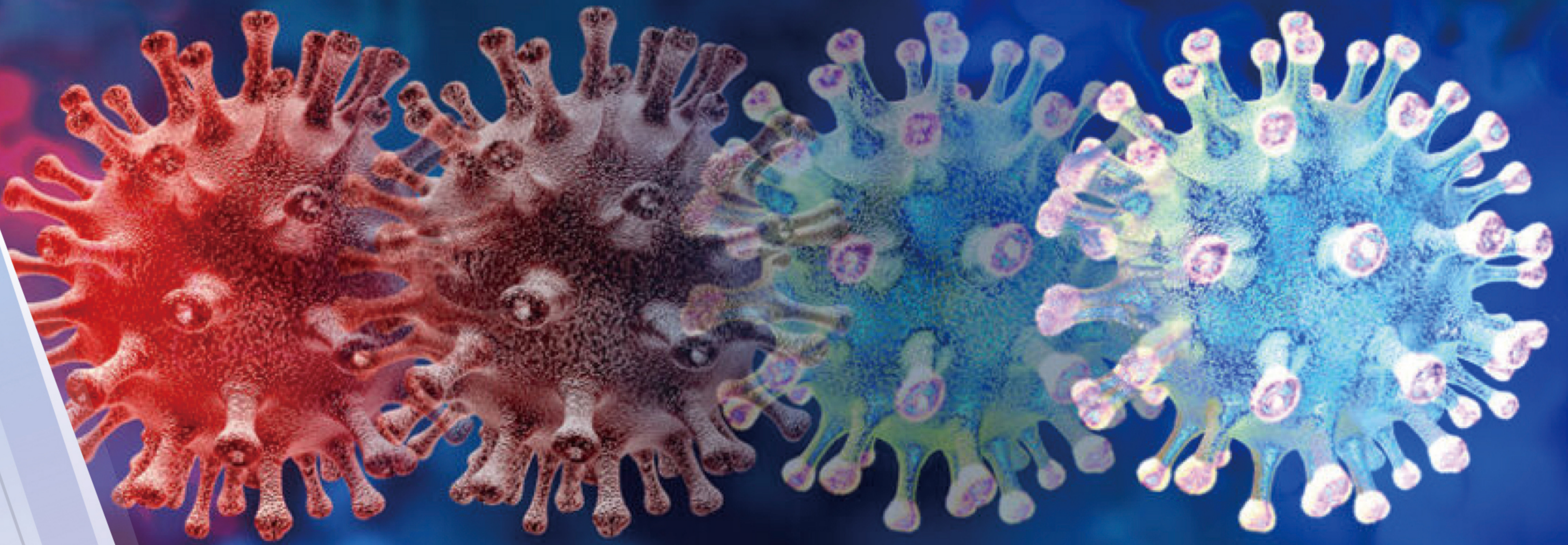
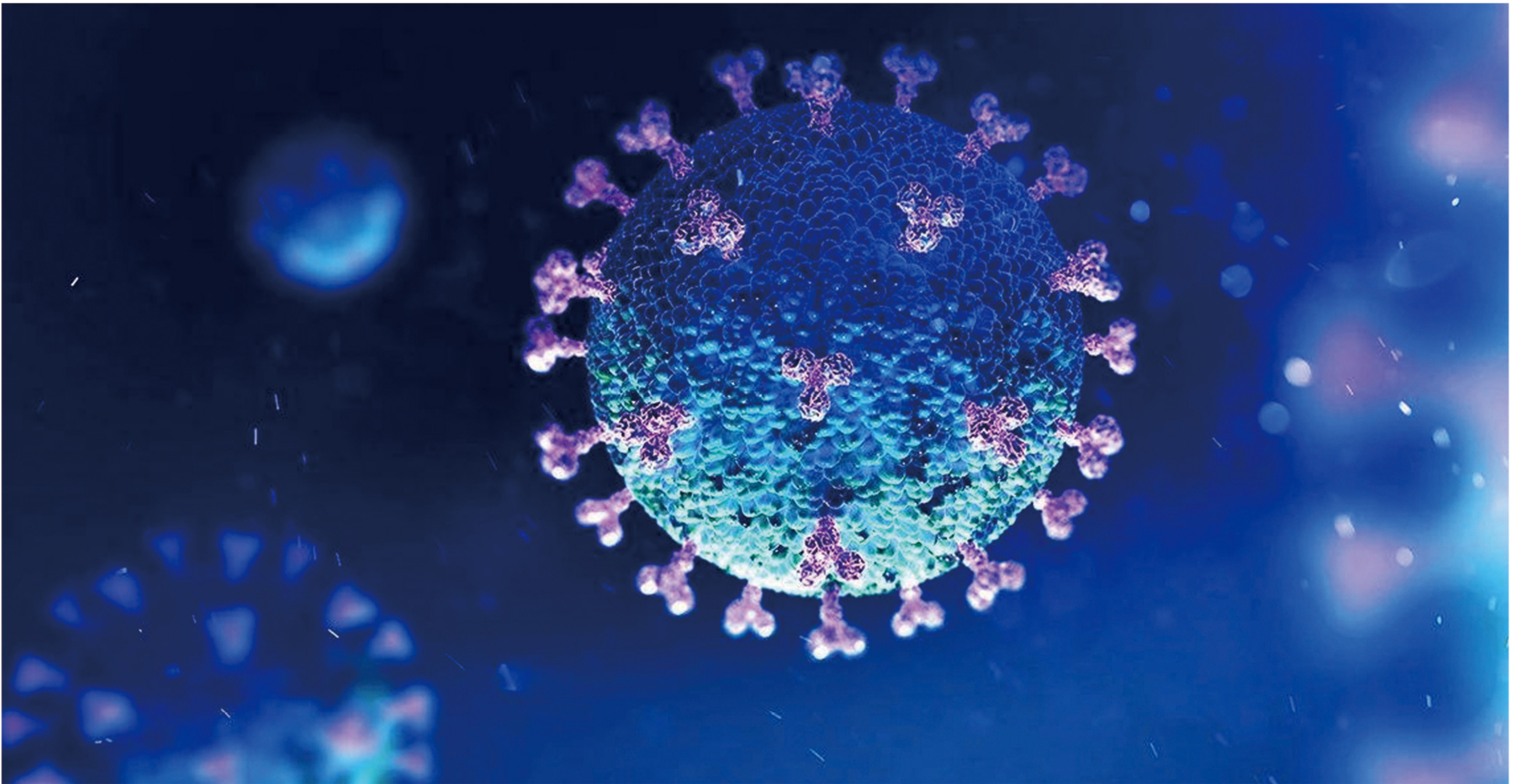


Covid-19 Variant Gene Detection

Superyears Sanger Sequencing Platform (Gold Standard)
Assist global epidemic prevention and control
Fast · Economical · Efficient · Simple





Background

The World Health Organization has advised all countries to increase their surveillance of how the virus is mutating, by sampling and sequencing COVID-19 from patients. It has also asked governments to strengthen biosafety and biosecurity measures. Likewise, the U.S. Centers for Disease Control and Prevention says SARS-CoV-2, the coronavirus that causes COVID-19, is always changing and has been changing all along. The head of Britain's Vaccination Effort also said the world faces around 4,000 variants of the virus that causes COVID-19. But three variants found to have come from South Africa, Britain and Brazil are most worrisome.

The Covid-19 is kind of RNA virus, which is easier for mutation comparing to DNA virus, up to now, thousands of new coronavirus mutations have been found, which brings two major problems, one is that the mutant may enhance the infectivity or pathogenicity of virus, and the other is that the mutant may reduce the protective effect of vaccines and neutralize antibodies.

The recent turbulent epidemic has even discovered a "triple mutation" mutant virus, which has surged infectivity and can evade certain Covid-19 RT-PCR tests. Therefore, regardless of Covid-19 screening test or the development of Covid-19 vaccines, the detection of Covid-19 virus variants has become the focus of current epidemic prevention and control.

At present, the screening test of Covid-19 is mainly through real-time fluorescent quantitative PCR (RT-PCR) methods, thus there are many types of mutations of the Covid-19 variants. Merely in India, more than 7,000 variants which cannot be detected by the RT-PCR method have been found. Aiming at solving such problem, about how to detect coronavirus mutation has become a new demands and challenge for epidemic prevention and control. Therefore, the Sanger Sequencer method has become a new breach for the detection of Covid-19 mutant.

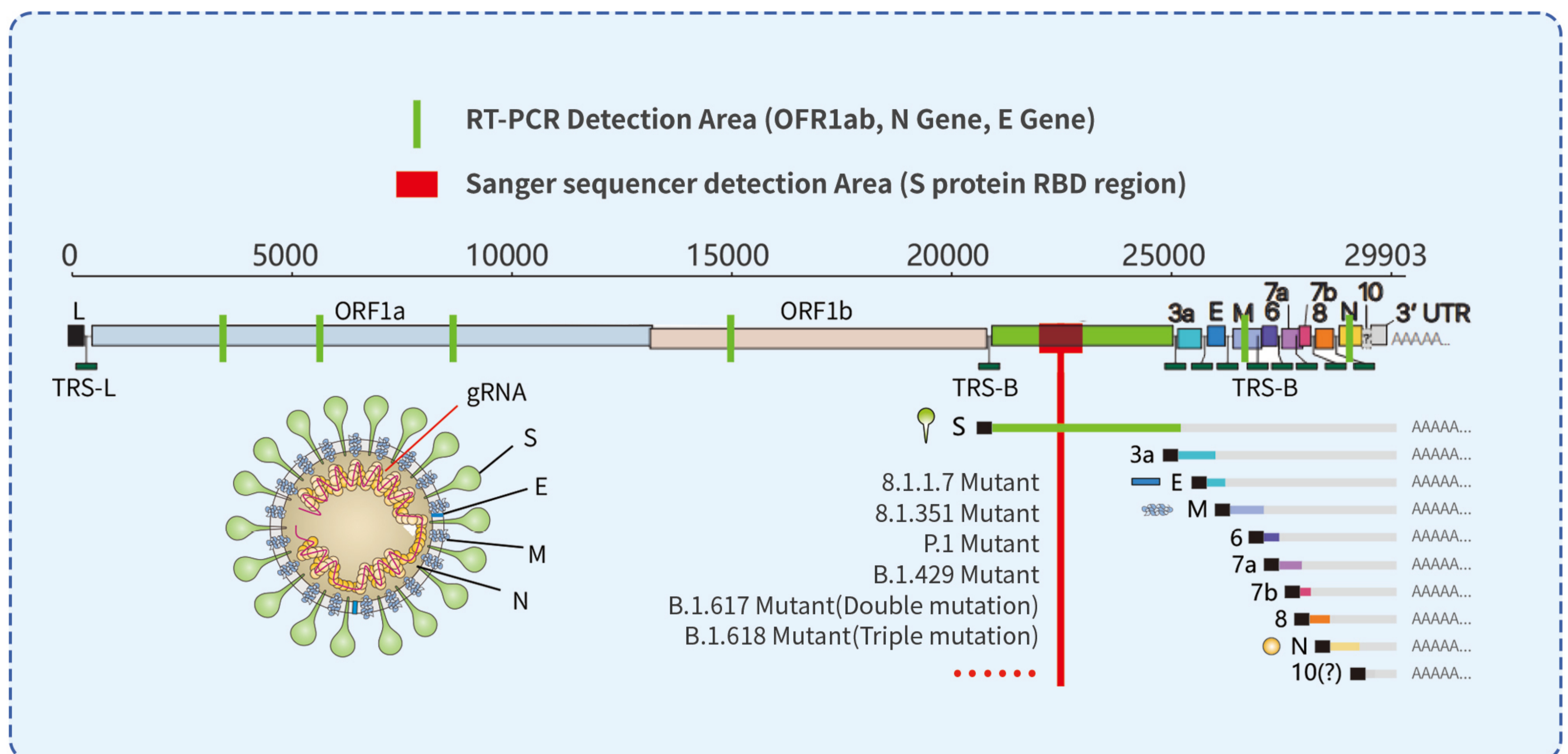
The mutation of Covid-19 is mainly the mutation of the Spike protein (S protein). The S protein is an important site for the new coronavirus to bind to the receptor, once the S protein mutates, it would accelerate the virus escape, increase the toxicity, and weaken the neutralization of antibody effects, etc., and it may also lead to a series of risks such as changes in the infected population, failure of detection tools, and weakened effects of neutralizing antibodies and vaccines.





Solution

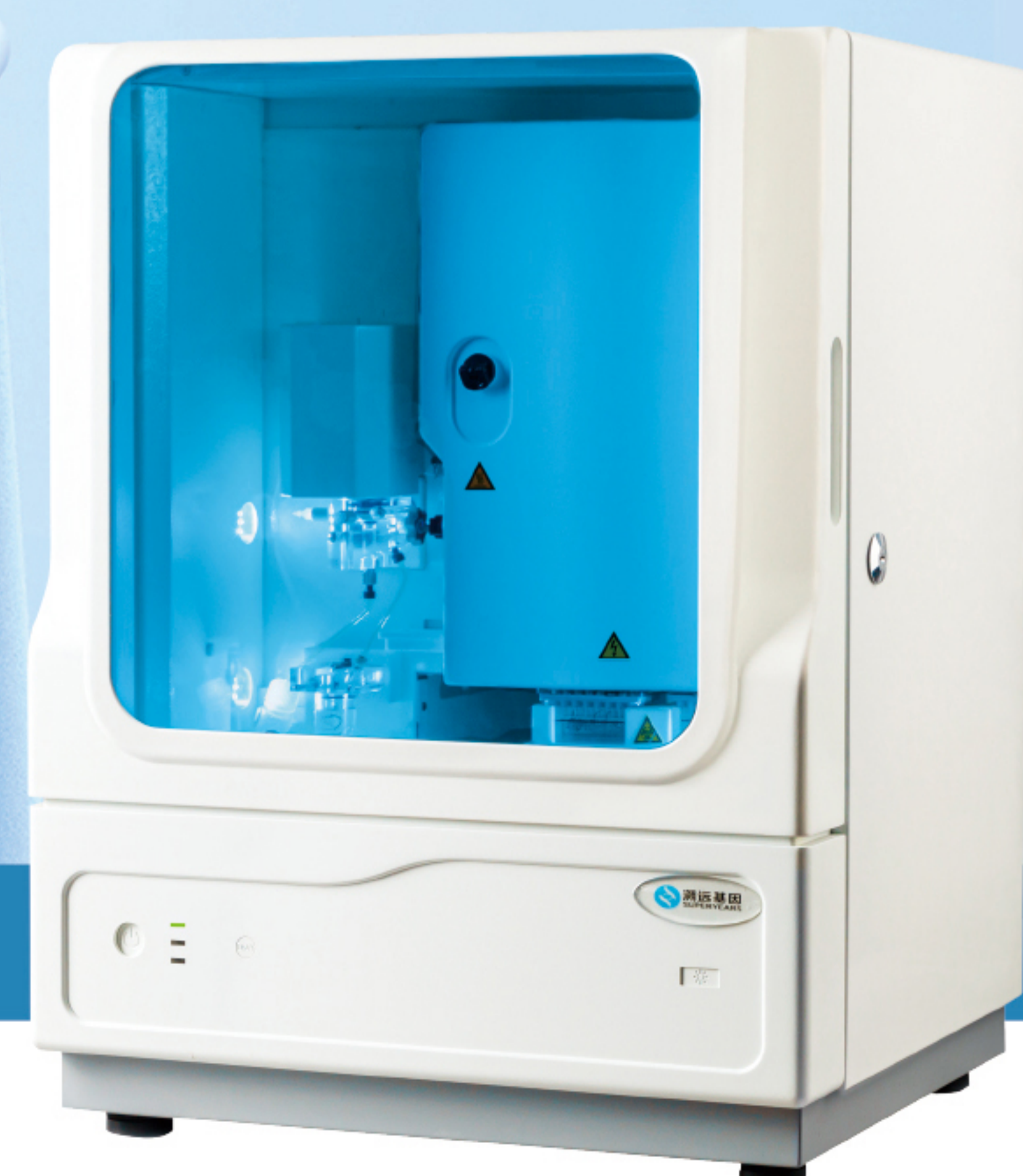
The Supeyears Sanger sequencing Platform (gold standard) provides one-stop solutions including gene analyzer, reagents and software analysis. The principle is to accurately sequence the RBD region of S protein, and then compare it with the database of new coronavirus variants to determine the mutation site. This detection method is fast, economic, efficient and simple, which can detect multiple mutations at the same time, so as to effectively promote COVID-19 prevention and control.



Superyears Sanger Sequencing (Gold Standard) Platform

Superyears Classic Series Genetic Analyzer

6-Colour and 8-Colour Fluorescent, 8/16 Channels





Superyears Classic Series Genetic Analyzer

Based on the principle of Sanger sequencing, which supports 6-color and 8-color fluorescence, 8/16 channels, and can be applied to gene sequencing and fragment analysis, as well as Covid-19 research, Prevention and diagnosis.



Reagents

With years of experience in reagent research and development, we can provide supporting detection reagents (CE).

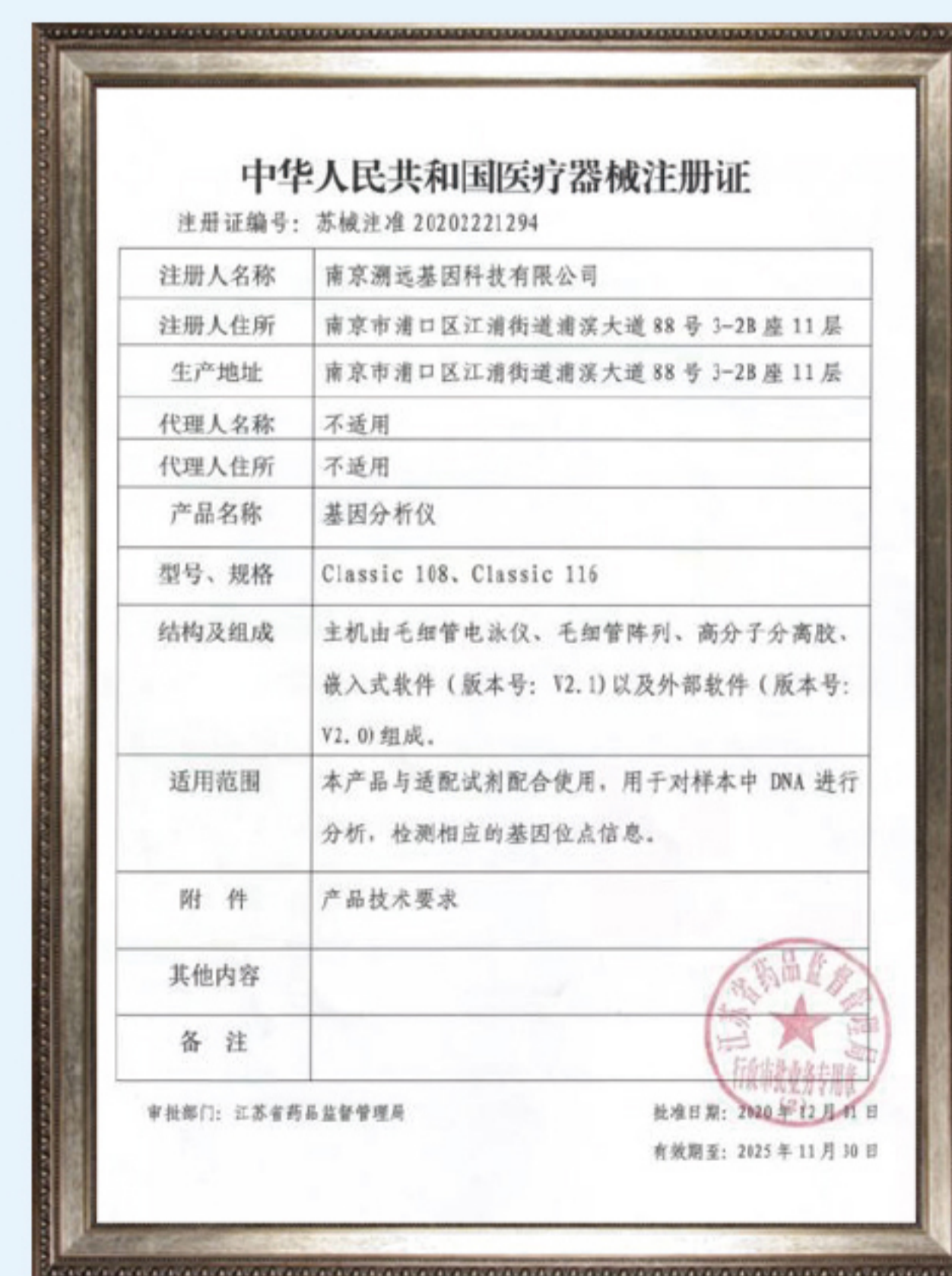


Software Analysis System

An analysis system which is customized by Superyears Gene Technology for Covid Virus strains analysis, completing coronavirus mutant detection through one-click operation.

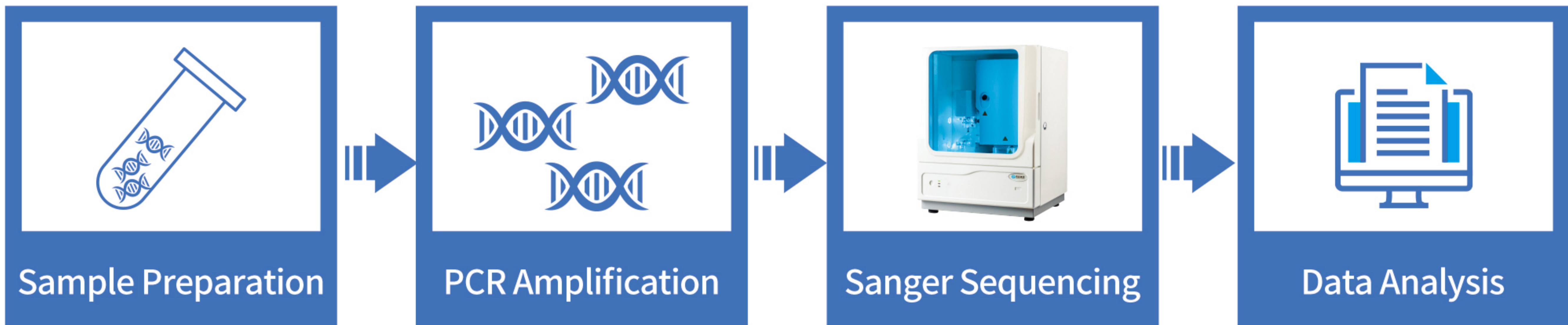


Jiangsu Medical Device Registration Standard Number:20202221294, CE Certification





● SANGER SEQUENCER APPLIED TO THE DETECTION OF COVID-19 VARIANTS

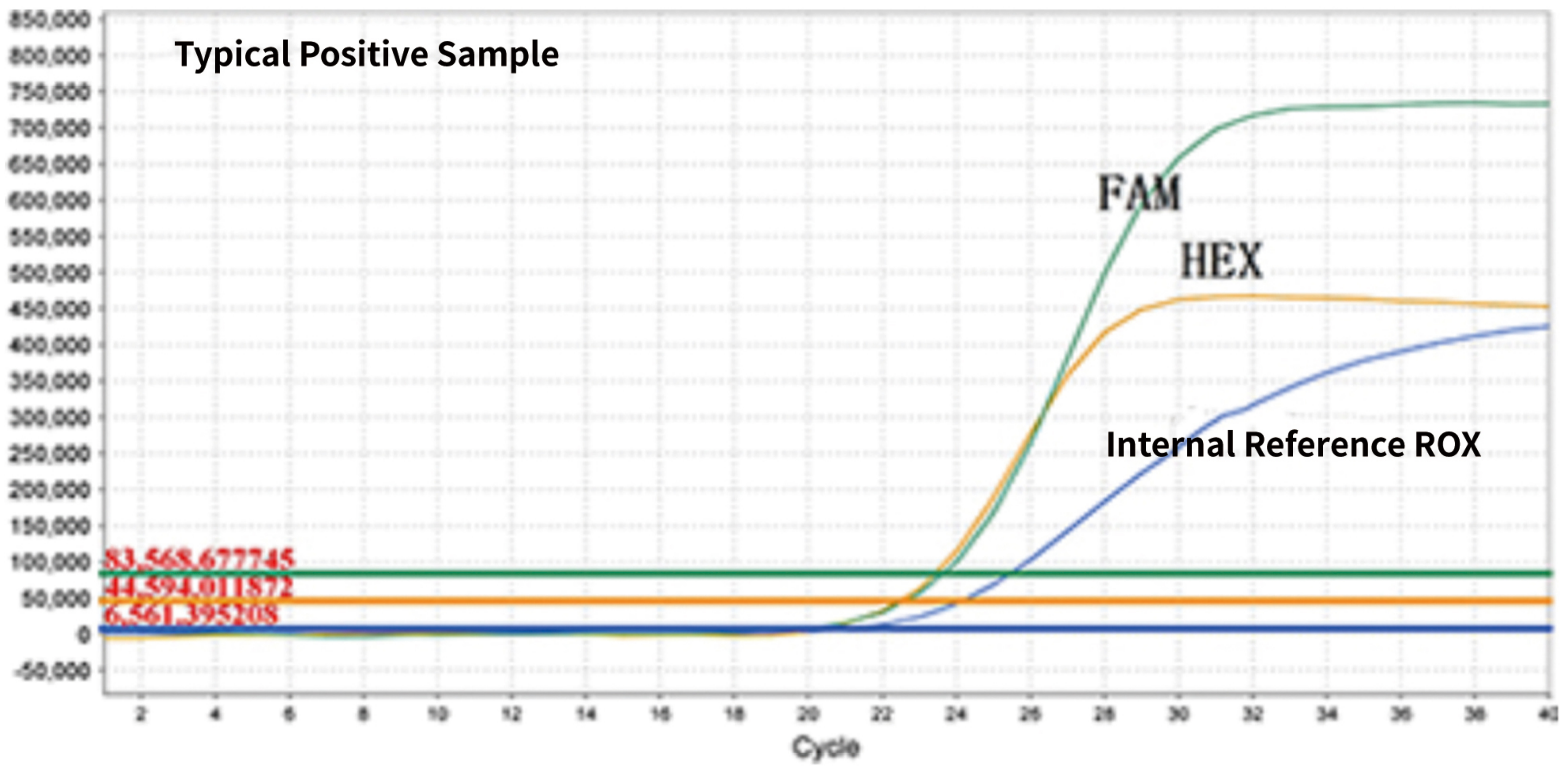


● APPLICATION COMPARISON OF RT-PCR AND SANGER SEQUENCER IN COVID-19 DETECTION

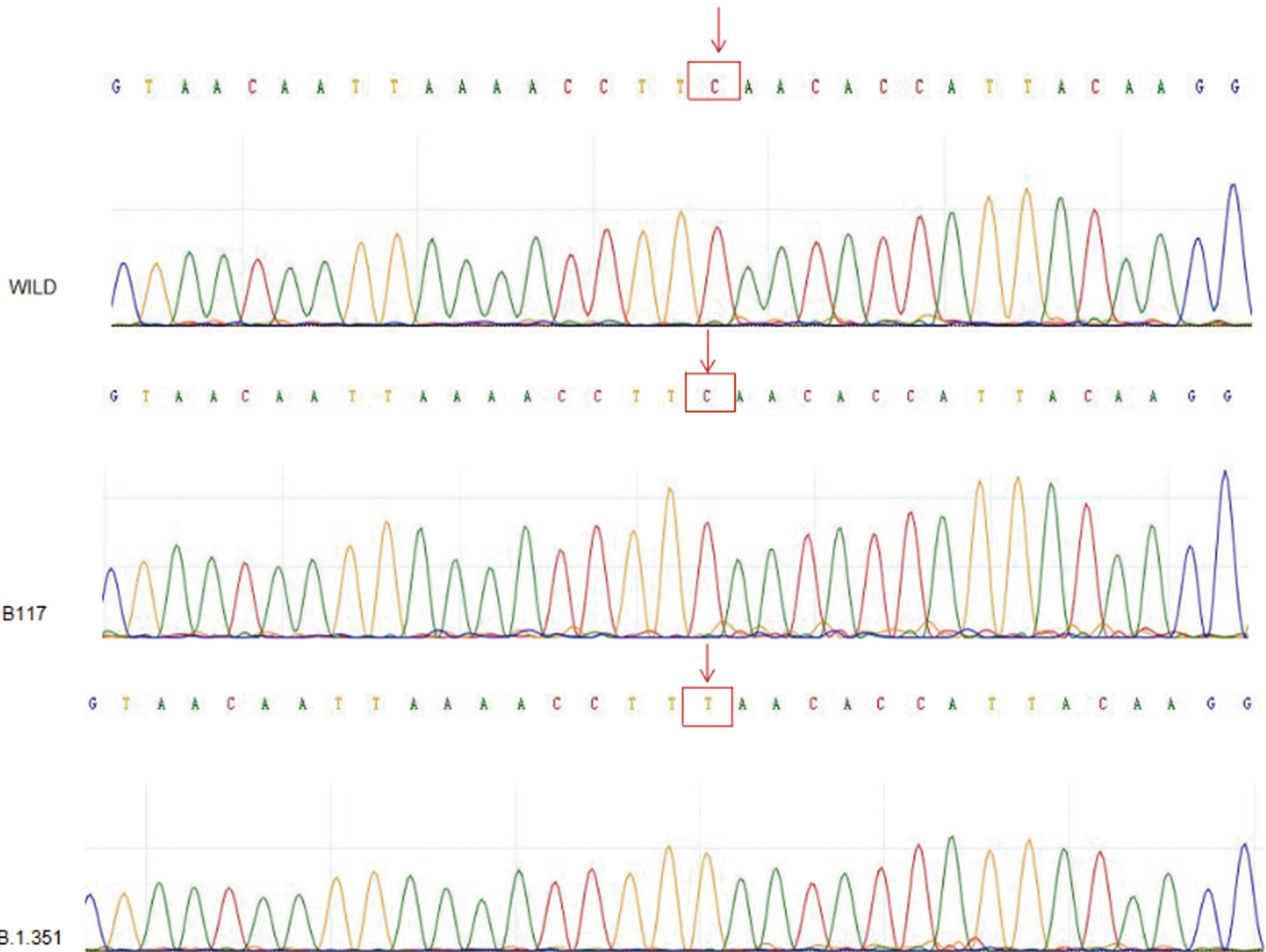
	RT-PCR	Sanger Sequencing	Whole Genome Sequencing
Detection Area	Specific area (ORF1ab, N Gene, E Gene)	gold standard' Sanger sequencing (RBD region of S Protein)	Viral genome sequencing
Covid-19 Application	Covid-19 Screening Test	Covid-19 Mutant Test	Covid-19 Mutant Test
Running Time	1h	1.5-2h	1-2 Day
Detection Flux	About 2000 Samples/Day	About 128 Samples/Day	About 96 Samples/Day
Single inspection cost	About 5USD	About 16USD	About 400USD
Data Analysis	Simple	Simple	Complex
Defects	Unable to detect thousands of mutant	Flux less than PCR	Long time, high cost, complicated operation



Whole Genome Sequencing Results Display



RT-PCR Results Display



Sanger Sequencing Results Display



Contact us

Add: 11/F, block 3-2B, No.88 Pubin Avenue of Jiangpu Street, Pukou District, Nanjing
Tel: +86 025-57561788 Mobile: +86 19871200893
Email: contato@superyears.com



www.superyears.com