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Plexense Head Office

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Simple. Fast. Reliable.

Plexense ACCEL ELISA® COVID-19 Kit

For Detection of Total Antibody to SARS-CoV-2 in Human Serum



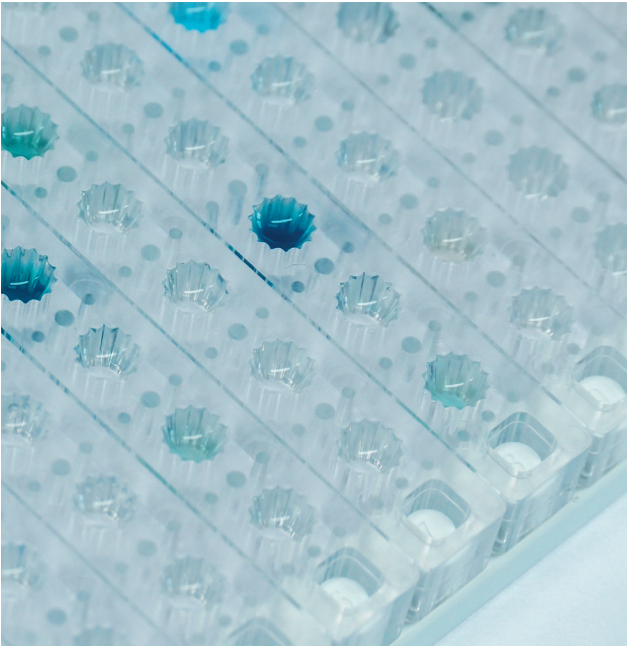
Simple.
Fast.
Reliable.

This test kit is a serology-based SARS-CoV-2 total antibody detection assay which utilizes Plexense's proven and patented ACCEL ELISA® technology for sensitive, rapid and accurate results.

The ACCEL ELISA® can be used as a rapid and reliable tool to assess the immune response of the patient during and after the infection of COVID-19 virus.

What is ACCEL ELISA®?

ACCEL ELISA® is the NEXT-GENERATION immunoassay platform



What is ACCEL ELISA®?

ACCEL ELISA® combines a unique and proprietary well plate design with advanced surface chemistry and reagent formulation to create an innovative immunoassay platform designed to maximize speed and sensitivity. ACCEL ELISA® provides an increased sensitivity, simplicity, speed when compared to traditional ELISA techniques. Reproducible results can be achieved in 30minutes or less.

Competitiveness

Speed	Assay results in 30minutes
Simplicity	2-step reaction with 1-wash
Sensitivity	5-40 times higher sensitivity
Compatibility	Compatible with most antibody/antigen pairs
Cost saving	Seamless integration to existing plate readers
Reproducibility	More excellent

Simple Process & Fast

ACCEL ELISA®



30min

Total incubation time

	Reaction time	Washing	Incubation
ACCEL ELISA®	30min	1(time)	2 (times)

Conventional ELISA



	Reaction time	Washing	Incubation
Conventional ELISA	4.5hr	3~5 (times)	4~7 (times)

Core Technology of ACCEL ELISA®

Proprietary well design

- Application of unique well design to maximize surface.
- Increased surface area offers improved sensitivity and maximized enzymatic reaction.
- Build up technical barrier against competitors' similar technologies with multiple well design patents.

Surface treatment technology

- Plexense's proprietary surface chemistry eliminates blocking step.
- Minimized non-specific reaction that affects the results by applying unique surface treatment to the well surface.

Optimized reagent formulation

- Plexense's reagents are formulated to simplify immunoassay with single wash.
- Shorten protocol through technology that enables homogeneous mixing to simplify the immunoassay.

Diagnostic Platform

Various diversified makers							
Human CEA	Human HE4	Cortisol	Mouse IgG	Human IgG	Streptomycin	Oxytetracycline	Ochratoxin
Fumonisin	Zearalenone	Deoxynivalenol	Aflatoxin B1	Aflatoxin M1	Canine Heart worm disease	Canine distemper virus	
Canine corona virus				Canine parvo virus			

Platform 'ACCEL ELISA®'

Customized	Diagnosis of viral infectious disease.	Cancer Marker Screening	Hormone Testing
	Antibody Assay	Screening for Food Safety	Veterinary Diagnostics

4.5hr

Total incubation time

Why choose **ACCEL ELISA®** over other platform for COVID-19?

Technical Advantage

- Plexense has developed the world's first proprietary plate design with advanced surface chemistry and reagent formulation.
- ACCEL ELISA® provides excellent sensitivity compared to conventional ELISA methods.
- Plexense's technology patented world-wide with 36 patents in US, Japan and Korea.



Innovative Well Design



Best-in Class Bio-Markers
(100% Korea Manufactured)

30min

Assay Time

Speed

Reproducible results can be achieved in 30 minutes. ACCEL ELISA® provides an increased sensitivity, simplicity, speed when compared to traditional ELISA techniques.

2,880test

Per 8hr

Unrestricted

The ultimate solution to address the mass testing requirements. The ACCEL ELISA® testing can be deployed under minimized laboratory conditions with the least amount of resources and without highly trained technicians. This is the ultimate solution to address the rapidly surging case of COVID-19 worldwide.

98.5%

Overall Agreement with RT-PCR

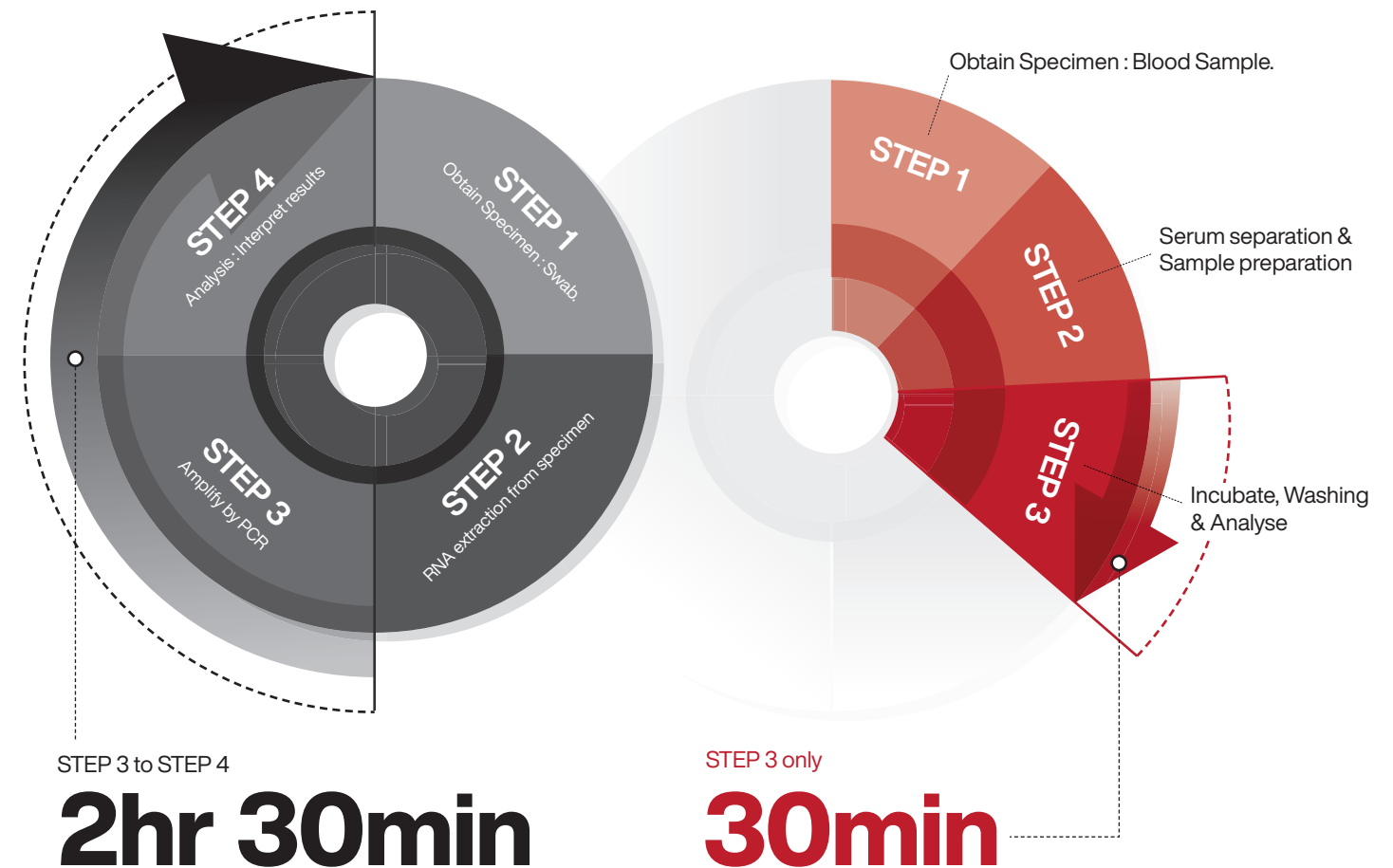
Accuracy

The ACCEL ELISA® detects IgG, IgM, IgA, antibodies to COVID-19 virus and provides a high level of accuracy similar to RT-PCR testing method.

Simple Process

RT-PCR

ACCEL ELISA®



ACCEL ELISA® COVID-19

		Positive	Negative	Total	%
PCR	Positive	85	5	90	94.4%
	Negative	0	251	251	100%
	Total	85	256	341	98.5%

Approved by Korea Research
Institute of Bioscience and
Biotechnology

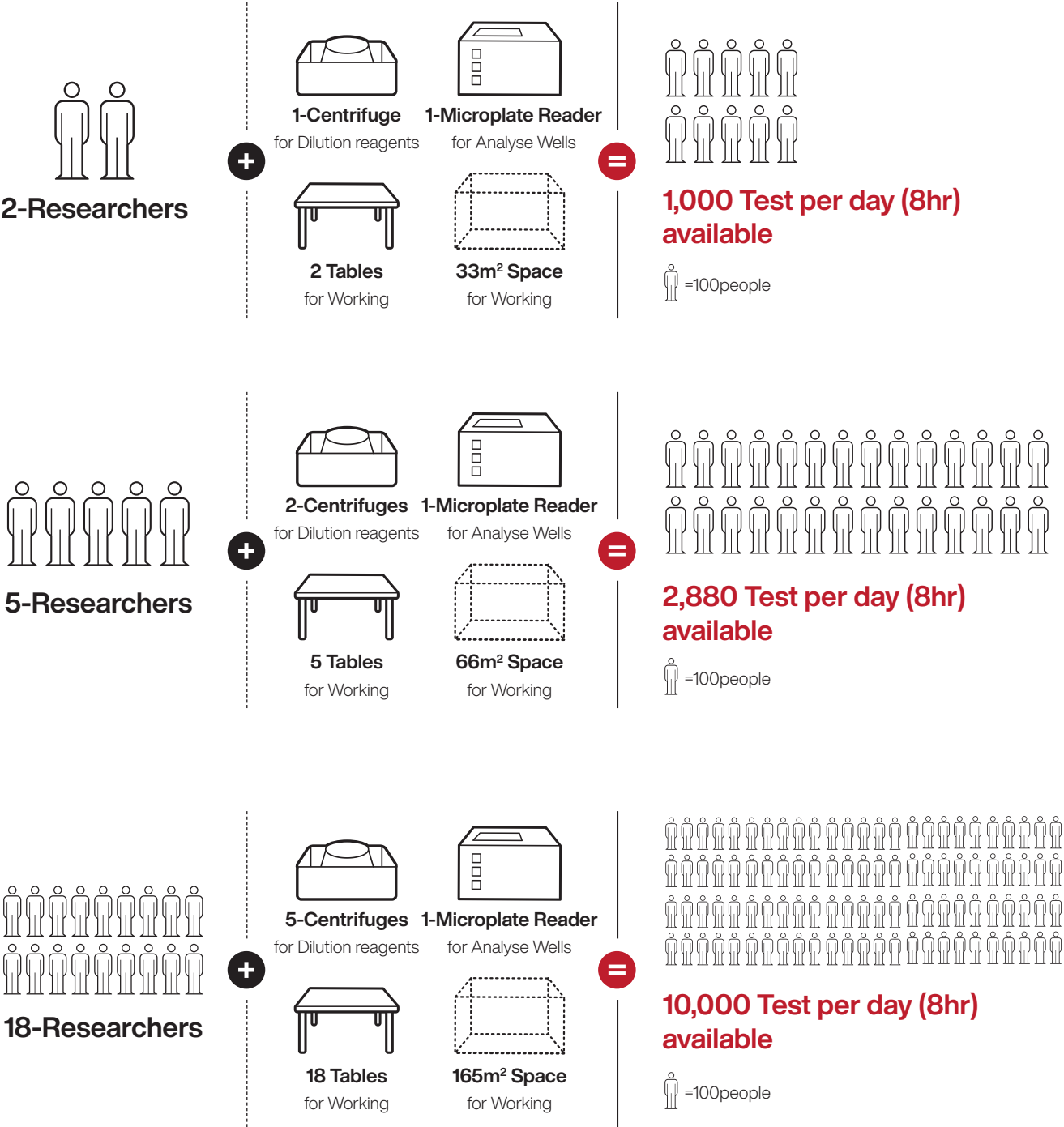
- Clinical sample provider : Korea Institute of Radiological & Medical Sciences
- Evaluation institution : Bio Nano Health Guard Research Center
- Evaluation period : May 14~16, 2020

5th day 100% upon infection

Days upon infection	Positive %	Negative %
1~4	66.7%	100%
5~10	100%	100%
≥ 11	100%	100%

Easy scale-up to any testing capacity

The ACCEL ELISA® allows for quick and easy scale-up to any testing capacity in very short period of time (e.g. 1,000 test per day capacity to 10,000 tests per day capacity can be scaled-up in less than 1 week) - making it the most ideal platform for mass testing at ultra-high throughput areas such as airports, borders, sports stadiums, schools, etc.

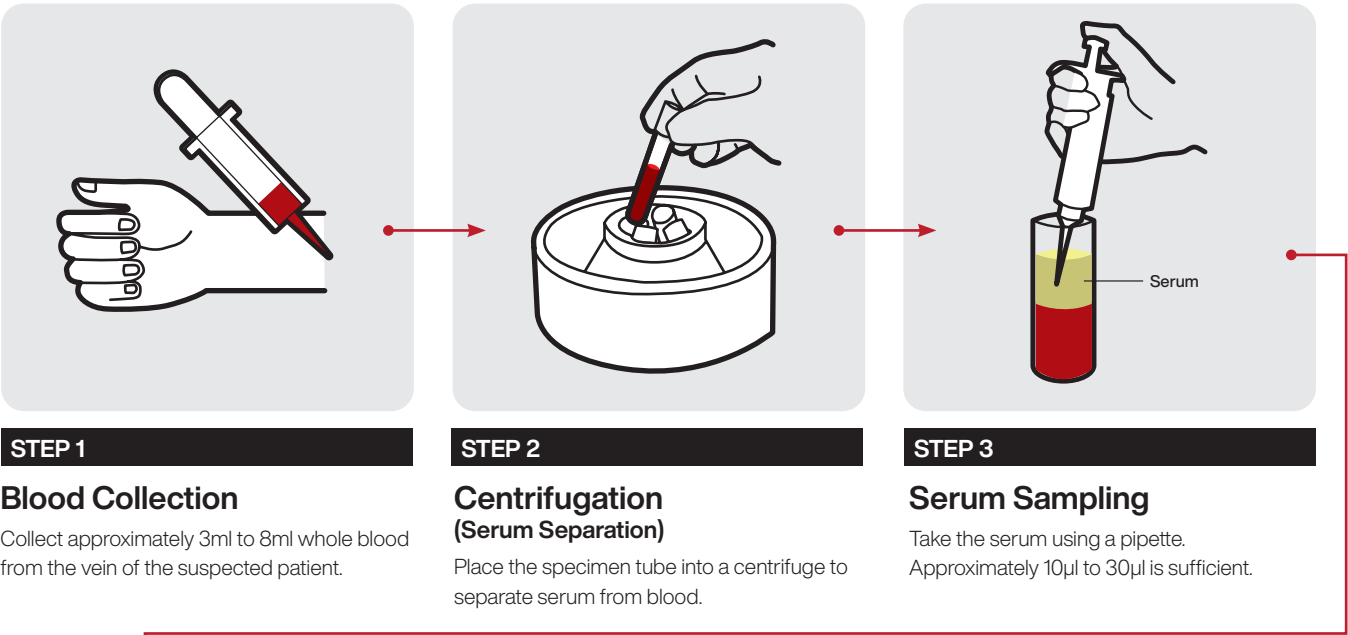


ACCEL ELISA® COVID-19

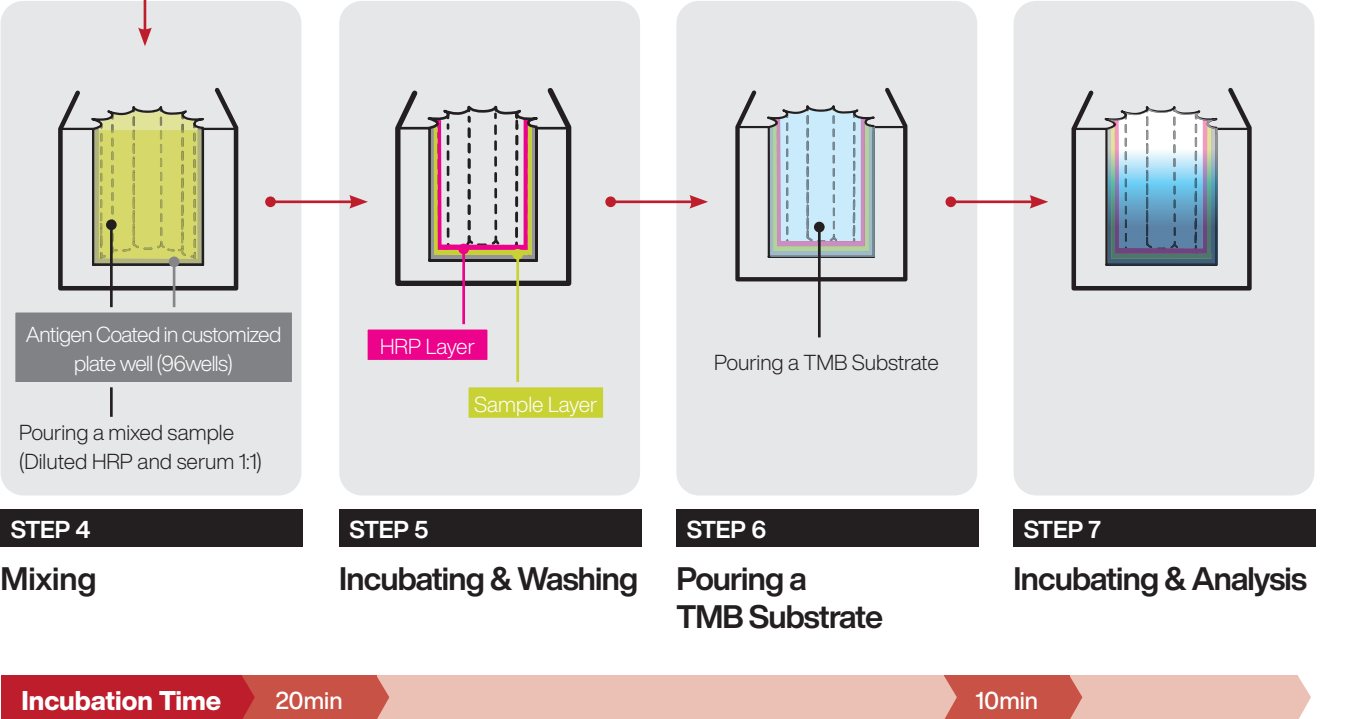
How does it work?

Sample Preparation Sequence

The process of extracting samples to be used for plate well.



Diagnosis Process

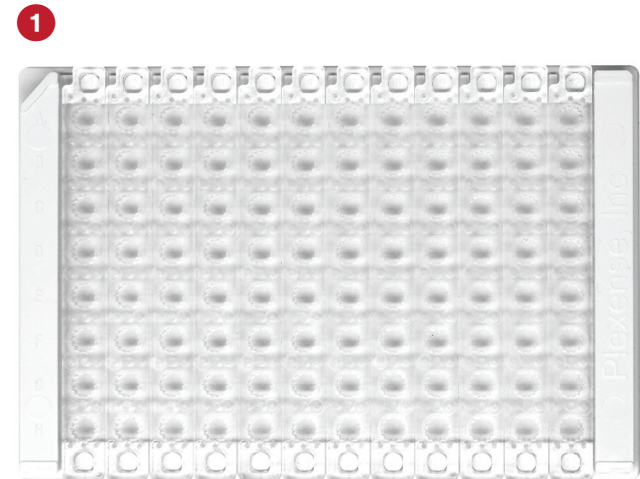


Product Package

The ACCEL ELISA® COVID 19 assay uses SARS CoV 2 nucleocapsid protein (N protein) custom developed by the BioNano Health Guard Research Center (a division of the Ministry of Science and ICT, Korea) in collaboration with Korea Research Institute of Bioscience and Biotechnology (KRIBB) for the prior use of COVID 19 antibody detection on ACCEL ELISA® platform.

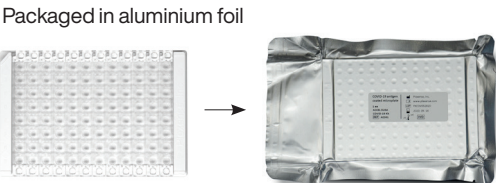
ACCEL ELISA® COVID-19 Kit

For the Detection of Total Antibody to SARS-CoV-2 in Serum

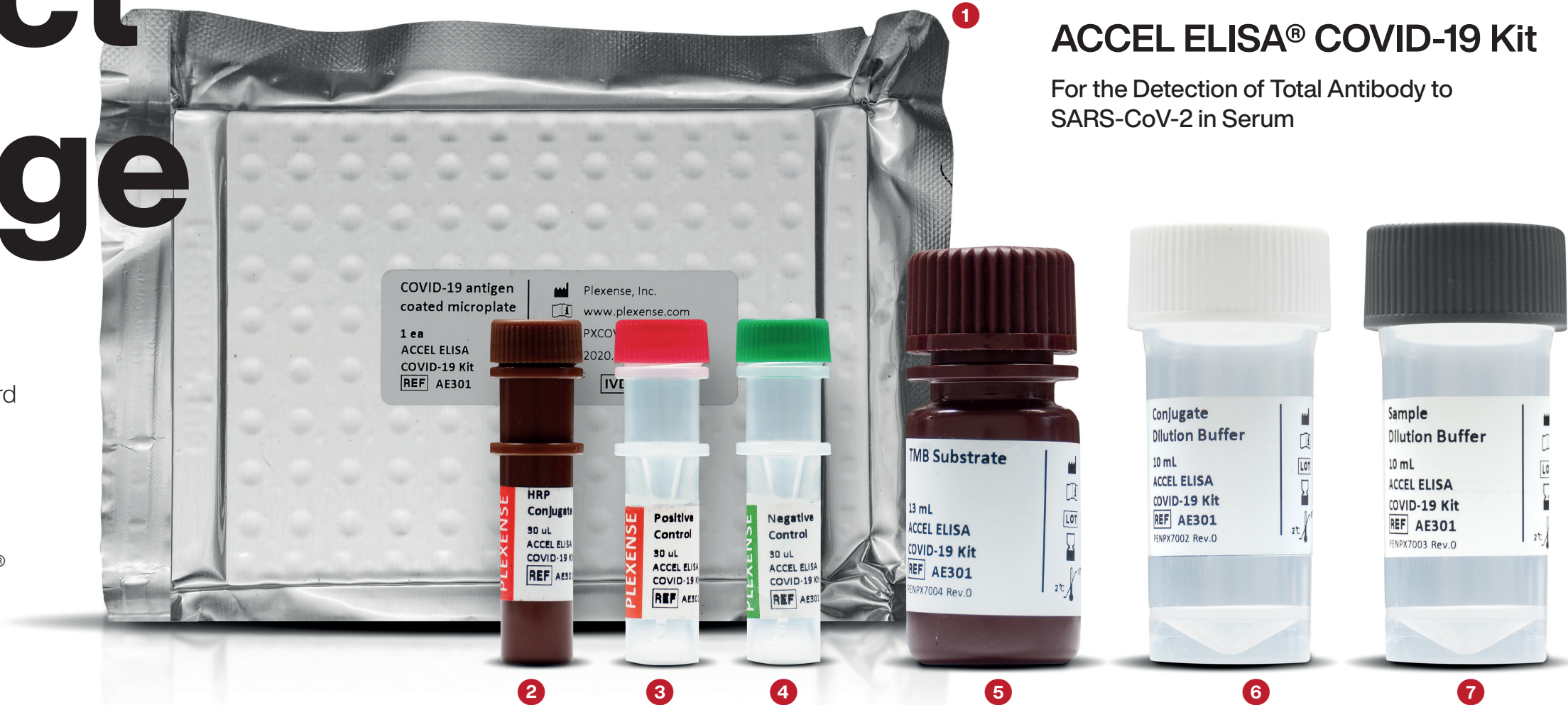


COVID-19 antigen coated microplate

Quantity : 1ea
96 well microplate (packaged in aluminium foil)



Platform	Product Name	Detection	Product Code	Status
ACCEL ELISA®	Plexense ACCEL ELISA® COVID-19 Kit	IgG/IgM/IgA (Total antibody)	AE301	On Sale
	Plexense ACCEL ELISA® COVID-19 IgG Quantitative Kit	IgG	AE302	2020 OCT.
	Plexense ACCEL ELISA® COVID-19 Kit IgM Kit	IgM	AE303	2020 OCT.
	Plexense ACCEL ELISA® COVID-19 Kit Antigen Kit	Covid19 antigen	AE304	2020 NOV.



2

HRP-conjugate

Quantity : 1 vial
Liquid reagent



3

Positive control

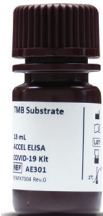
Quantity : 1 vial
Liquid reagent



4

Negative control

Quantity : 1 vial
Liquid reagent



5

TMB Substrate

Quantity : 1 vial
Liquid reagent



6

Conjugate dilution buffer

Quantity : 1 vial
Liquid reagent



7

Sample dilution buffer

Quantity : 1 vial
Liquid reagent