FAPON

COVID-19 Neutralizing Antibody Titer Testing Solution for ELISA & CLIA

Raw Materials | Quality Controls | Beads | Kit Development

To address the unmet medical needs during this COVID-19 pandemic, Fapon once again manifests its R&D strength to the world by being one of the leading biotechnology companies to launch the **COVID-19 Naturalizing Antibodies Titer Testing Solution for ELISA and CLIA.**

This solution provides **raw materials**, **quality controls** and **test components** to aid the evaluation of vaccine efficacy, antibody-drug effectiveness, convalescent plasma therapy, and seroepidemiological investigation.

What is COVID-19 Neutralizing Antibodies?

Neutralizing antibodies (NAbs) have significant preventive and therapeutic effects by playing crucial roles in controlling viral infection. NAbs target the viral S protein and block the binding ability of S protein to the human Angiotensin-converting enzyme 2 (ACE2) receptor, thus preventing viral entry into host cells.

Clinical Applications

Vaccine Efficacy

The clinical therapeutic effect after vaccination is determined by the titers of NAbs produced by the immune response, hence the detection of NAbs can evaluate the vaccine efficacy.

Antibody-Drug Effectiveness

NAbs are regarded as important therapeutic agents for COVID-19 treatment. In antibody drug development, results of NAbs detection reflect on the neutralizing abilities against the virus, serving as one of the assessing criteria for drug effectiveness evaluation.

Convalescent Plasma Therapy

Convalescent plasma therapy is an experimental treatment for patients with COVID-19. Because people who recovered from COVID-19 have the antibodies to fight off infections, using their plasma as treatment to people with severe COVID-19 can boost the ability to combat the virus. The detection of neutralizing antibody levels can identify the ideal recovered plasma donors and indicate the effectiveness of treatment.

Seroepidemiological Investigation

Suggested by the WHO, NAbs tests should ideally be performed if samples are positive or equivocal for either IgM, IgA or IgG. Hence it can be used to determine social immunity and assist seroepidemiological study.

Clinical Applications

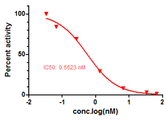
Fapon COVID-19 NAbs Titer Testing Solution features raw materials and quality controls that apply in **sVNT**, which is **less time consuming** than other test methods, making it more efficient and suitable for academic research and clinical needs.

	VNT (Virus Neutralization Test)	pVNT (Pseudovirus-based Virus Neutralization Test)	sVNT (Surrogate Virus Neutralization Test)
Facility Required	A specialized biosafety level 3 laboratory (BSL3)	A specialized biosafety level 2 laboratory (BSL2)	A specialized biosafety level 2 laboratory (BSL2)
Live Virus	Require	Can be replaced with pseudovirus-based virus	Can be replaced with the purified receptor-binding domain (RBD) protein from the viral spike (S) protein
Detection Time	2-4 days	2-4 days	1-2 hours

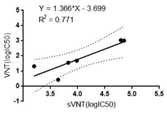
ELISA Platform

Raw Materials			
Catalog No.	Source	Tag	Buffer System
GECACE2S101	CHO	His	10mMPB+150mMNaCl, pH7.4
GEEACE2S101		His	10mMPB+10% NBS+50% glycerol+0.1% P300, pH7.4
GECACE2S102		hFC	10mMPB+150mMNaCl, pH7.4
GEEACE2S102		hFC	10mMPB+10% NBS+50% glycerol+0.1% P300, pH7.4
FPZ0557		mFC	10mMPB+150mMNaCl, pH7.4
FPZ0565		mFC	10mMPB+10% NBS+50% glycerol+0.1% P300, pH7.4
FPZ0537		His	10mMPB+150mMNaCl, pH7.4
FPZ0540		His	10mMPB+10% NBS+50% glycerol+0.1% P300, pH7.4

The IC50 of quality control is 0.5623 nM (FPZ0570)



Fapon sVNT exhibits high clinical correlation to VNT



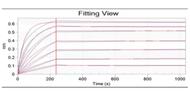
CLIA Platform

Raw Materials			
Catalog No.	Source	Tag	Buffer System
GECACE2S101	CHO	His	10mMPB+150mMNaCl, pH7.4
GECACE2S102		hFC	
FPZ0557		mFC	
FPZ0537		His	

Others
sVNT Test Component
Concentrated AE Solution (GECACE2S102)
Concentrated Bead Solution (FPZ0537)
AE Diluent Buffer
Beads Diluent Buffer
Sample Diluent Buffer
Quality Control (FPZ0570)

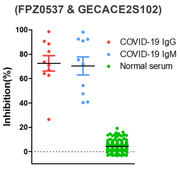
The affinity level between RBD and ACE2 via ForteBio is Nm

(FPZ0537 & GECACE2S102)

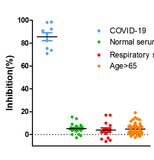


Fapon NAbs exhibits high sensitivity and specificity in clinical performance

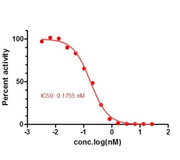
(FPZ0537 & GECACE2S102)



No significant cross-reactivity with samples of respiratory tract infection and samples of the elderly people



The IC50 of quality control is 0.1755 nM (FPZ0570)



*ACE2, as a cell receptor, plays an essential role in blood pressure regulation. As hypertension is prevalent in the elderly, most elderly samples are associated with hypertension.

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