

Datasheet

SARS-CoV-2 (2019-nCoV) Spike ELISA Kit

Product Name	SARS-CoV-2 (2019-nCoV) Spike ELISA Kit
Catalogue Number	BSV-ELISA-03
IVD or RUO	RUO
CE Marked	No
Size	96 tests

Description:

This SARS-CoV-2 (2019-nCoV) Spike ELISA Kit is an enzyme-linked immunosorbent assay for the quantitative measurement of 2019-nCoV CoV spike/S protein in. It contains recombinant 2019-nCoV CoV spike/S, and antibodies raised against the recombinant protein. This ELISA kit is complete and ready-to-use.

Product Details:

Assay Type: Solid Phase Sandwich ELISA (quantitative)

Conjugate: HRP

Specificity: Recognizes both recombinant and natural 2019-nCoV CoV spike

Storage: Store unopened kit at +2-8°C. Please refer to CoA for storage of opened kit.

Shipping: This ELISA Kit is shipped at ambient temperature

Regulatory/ Restrictions: For research use only.

CoV Nucleocapsid Background Information

The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2; DPP4, dipeptidyl peptidase-4; APN, aminopeptidase N; CEACAM, carcinoembryonic antigen-related cell adhesion molecule 1; Sia, sialic acid; O-ac Sia, O-acetylated sialic acid. The spike is essential for both host specificity and viral infectivity. The term 'peplomer' is typically used to refer to a grouping of heterologous proteins on the virus surface that function together. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. It's been reported that 2019-nCoV can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity. The main functions for the Spike protein are summarized as: Mediate receptor binding and membrane fusion; Defines the range of the hosts and specificity of the virus; Main component to bind with the neutralizing antibody; Key target for vaccine design; Can be transmitted between different hosts through gene recombination or mutation of the receptor binding domain (RBD), leading to a higher mortality rate.

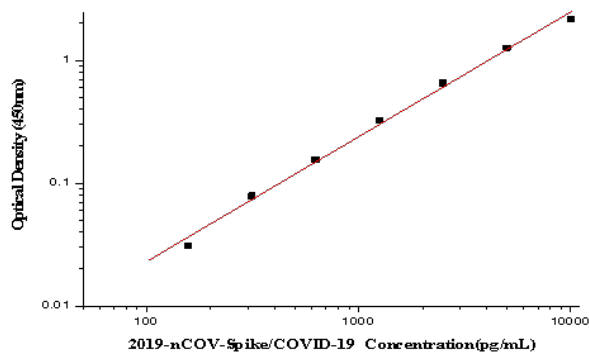
Materials Supplied

1. 96 well microplate coated with Capture Antibody
2. Detection Antibody conjugated to HRP
3. Standards
4. Wash Buffer Concentrate
5. Dilution Buffer Concentrate
6. Color Reagent A
7. Color Reagent B
8. Stop Solution

Performance Data

Concentration (pg/mL)	Zero standard subtracted OD
0	0
156.25	0.031
312.5	0.079
625	0.156
1250	0.326
2500	0.653
5000	1.265
10000	2.167

Figure 1: This standard curve for demonstration purposes shows the assay range between 100-10000 pg/mL. A standard curve should be generated for each assay.



References

Shen S, et al. (2007) Expression, glycosylation, and modification of the spike (S) glycoprotein of SARS CoV. *Methods Mol Biol.* 379: 127-35.

Du L, et al. (2009) The spike protein of SARS-CoV--a target for vaccine and therapeutic development. *Nat Rev Microbiol.* 7(3): 226-36.

Xiao X, et al. (2004) The SARS-CoV S glycoprotein. *Cell Mol Life Sci.* 61(19-20): 2428-30.