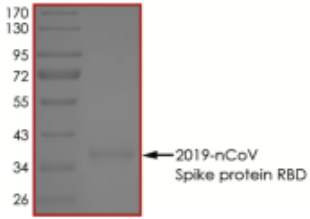




PRODUCT DATASHEET

Catalog No:	BSV-COV-PR-10	BSV-COV-PR-11	BSV-COV-PR-12	BSV-COV-PR-13
Pack Size	10 µg	20 µg	50µg	100µg
Product Name:	SARS-CoV-2 (2019-nCoV) Spike Protein S1 Subunit			
Description:	Recombinant 2019-nCoV Spike protein S1 subunit, receptor-binding domain (RBD) (319-541) was expressed in CHO cells using a C-terminal His tag.			
Concentration:	0.2µg/µl			
Species:	2019-nCoV, SARS-CoV-2			
Sequence:	Recombinant 2019-nCoV Spike protein S1 subunit, receptor-binding domain (RBD) (319-541) was expressed in CHO cells using a C-terminal His tag.			
Accession No.:	MN908947			
Tag:	C-terminal His-Tag			
Host:	Expressed in CHO Cells			
Activity:	Measured by its binding ability in a functional ELISA. Immobilized human ACE2 (19-740) protein (Fc tag) at 2µg/ml (100µg/well) can bind to 2019-nCoV Spike Protein RBD (His Tag).			
Purity:	>95% as determined by densitometry			

<p>Predicted Molecular Mass:</p>	 <p>The recombinant NCP-CoV (2019-nCoV) Spike Protein S1 Subunit predicts a molecular mass of approximately 39 kDa.</p>
<p>Formulation:</p>	<p>Recombinant protein stored in 50mM sodium phosphate, pH 7.5, 300mM NaCl, 150mM imidazole.</p>
<p>Endotoxin:</p>	<p>Endotoxin level is < 1.0 EU/μg purified protein (LAL test)</p>
<p>Shipping, Storage and Stability:</p>	<p>Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favourable performance, avoid repeated handling and multiple freeze/thaw cycles.</p>

<p>Background:</p>	<p>The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. It has been reported that 2019-nCoV can infect the human Respiratory Epithelial cells through interaction with the human ACE2 receptor. The S 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. So, S protein has a key role in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity.</p> <p>Known receptors binding 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.</p> <p>The S protein 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. Besides, the S protein is known to be essential in the binding of the virus to the host cell at the advent of the infection process.</p> <p>The main functions for the S 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.</p>
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