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32-190017: SARS-CoV-2 (2019-nCoV) Spike Protein (S1+S2 ECD, His tag) (Discontinued)

Application : Functional Assay

Description

Source: Baculovirus-Insect Cells. Calculated MW: 134.36 kDa. Product Description Predicting N End: Val 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.

Product Info

Amount :	100µg
Purification :	> 90 % as determined by SDS-PAGE.
Content :	Lyophilized from sterile 20 mM Tris, 300 mM NaCl, 10 % glycerol, pH 8.0. Please contact us for any concerns or special requirements. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Storage condition :	Samples are stable for up to twelve months from date of receipt at -20°C to -80°C Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Amino Acid :	A DNA sequence encoding the NCP-CoV(2019-nCoV) Spike Protein (S1+S2 ECD) was expressed with a polyhistidine tag at the C-terminus.

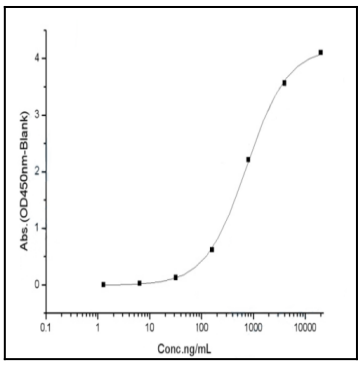


Fig.1: The 2019-nCoV Spike Protein (S1+S2 ECD, His tag) can bind with Human ACE2 in functional ELISA assay.

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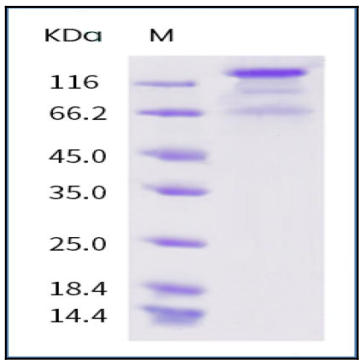


Fig.2: SDS-PAGE of SARS-CoV-2 (2019-nCoV) Spike Protein (S1 + S2 ECD, His tag)

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