



SARS-CoV-2 (2019-nCoV) Spike Protein (RBD, His Tag)

E27D2019-P8

Catalog Number: E27D2019-P8

Name: SARS-CoV-2 (2019-nCoV) Spike Protein (RBD, His Tag)

Gene Name Synonym: coronavirus spike; cov spike; ncov RBD; ncov s1; ncov s2; ncov spike; NCP-CoV RBD; NCP-CoV s1; NCP-CoV s2; NCP-CoV Spike; novel coronavirus RBD; novel coronavirus s1; novel coronavirus s2; novel coronavirus spike; RBD; S1; S2; Spike RBD

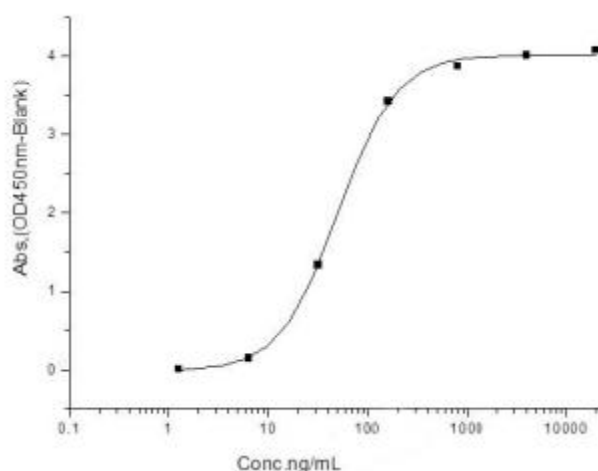
Protein Construction: A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) Spike Protein (RBD) (YP_009724390.1) (Arg319-Phe541) was expressed with a polyhistidine tag at the C-terminus

Source: 2019nCoV

Expression Host: HEK293 Cells

Purity: > 95 % as determined by SDS-PAGE

Bio Activity: Measured by its binding ability in a functional ELISA. Immobilized human ACE2 protein (Fc tag) at 10 μ g/mL (100 μ L/well) can bind 2019-nCoV Spike Protein (RBD, His Tag)(ZD2019-P8), the EC₅₀ of 2019-nCoV Spike Protein (RBD, His Tag)(ZD2019-P8) is 35-70 ng/mL.



Predicted N terminal: Arg 319

Molecular Mass: The recombinant SARS-CoV-2 (2019-nCoV) Spike Protein (RBD, His Tag) consists of 234 amino acids and predicts a molecular mass of 26.54 kDa

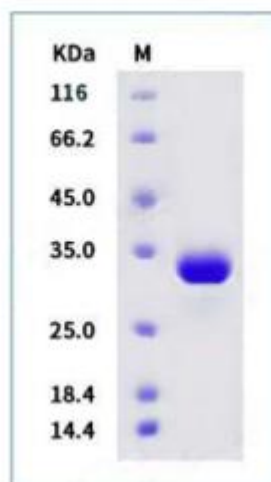
Formulation: Liquid or lyophilized from sterile 20mM PB, 300mM NaCl, pH 7.0, 10% glycerol Normally

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5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Stability & Storage: Samples are stable for twelve months from date of receipt at -20°C to -80°C. Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Protein Description: 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.

References 1. Shen S, et al. (2007) Expression, glycosylation, and modification of the spike (S) glycoprotein of SARS CoV. *Methods Mol Biol.* 379: 127-35. 2. 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. 3. Xiao X, et al. (2004) The SARS-CoV S glycoprotein. *Cell Mol Life Sci.* 61 (19-20): 2428- 30.

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