

COVID 19 Spike Protein (RBD) Coronavirus Active Protein | COVID-19 active protein

Recombinant 2019-nCoV Spike Protein (RBD, His Tag)

CATALOG #
AAA177002

HOST
Baculovirus-Insect Cells

PRODUCT SYNONYMS

COVID 19 Spike Protein (RBD) Coronavirus; Recombinant 2019-nCoV Spike Protein (RBD, His Tag); 2019 Novel Coronavirus; Coronavirus; CoV; COVID-19 virus; HCoV-2; Human Coronavirus 2019; SARS2; SARS-CoV-2; Severe acute respiratory syndrome coronavirus 2; Receptor Binding Domain; COVID-19 active protein

PRODUCT SPECIFICATIONS

Host	Baculovirus-Insect Cells
Purity/Purification	> 95 % as determined by reducing SDS-PAGE.
Form/Format	Lyophilized from sterile 20mM PB, 300mM NaCl, pH 7.0, 10% glycerol, 5% Trehalose, 5% Mannitol, 0.01% Tween-80.
Sequence Positions	Arg319-Phe541
Sequence Length	1273
Species	virus
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized human ACE2 protein (Fc tag) (Cat: at 2 ug/mL (100 uL/well) can bind Recombinant 2019-nCoV Spike Protein (RBD, His Tag) (Cat: the EC50 of Recombinant 2019-nCoV Spike Protein (RBD, His Tag) (Cat: is 35-70 ng/mL.
Endotoxin	< 1.0 EU per ug as determined by the LAL method.
Tag	C-6His
Reconstitution	It is recommended that sterile water (400uL) be added to the vial to prepare a stock solution of 0.25mg/mL. Concentration is measured by UV-Vis.
Preparation and Storage	Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8 degree C for 2-7 days. Aliquots of reconstituted samples are stable at < -20 degree C for 3 months. Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

ADDITIONAL INFORMATION

Related Product Information for COVID-19 active protein

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, Oacetylated 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.

NCBI AND UNIPROT INFORMATION

NCBI GI #	1796318598
NCBI Accession #	YP_009724390.1
NCBI GenBank Nucleotide #	YP_009724390.1
Molecular Weight	26.54 kDa
NCBI Official Full Name	surface glycoprotein

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/baculovirus-insect-cells-covid-19-active-protein/covid-19-spike-protein-rbd-coronavirus/177002>