

Recombinant MERS-CoV Spike/S1 Protein (S1 Subunit, aa 1-725, His Tag), HPLC-verified



Catalog Number:PKSV030242

Note: Centrifuge before opening to ensure complete recovery of vial contents.

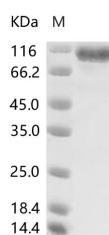
Description

| | |
|------------------------------------|--|
| Synonyms | coronavirus s1 Protein;MERS-CoV;coronavirus s2 Protein;MERS-CoV;coronavirus spike Protein;MERS-CoV;cov spike Protein;MERS-CoV;ncov RBD Protein;MERS-CoV;ncov s1 Protein;MERS-CoV;ncov s2 Protein;MERS-CoV;ncov spike Protein;MERS-CoV;RBD Protein;MERS-CoV;S Protein;MERS-CoV;s1 Protein;MERS-CoV;Spike RBD Protein;MERS-CoV |
| Species | MERS-CoV |
| Expression Host | HEK293 Cells |
| Sequence | Met1-Glu725 |
| Accession | AFS88936.1 |
| Calculated Molecular Weight | 79.9 kDa |
| Observed molecular weight | 94 kDa |
| Tag | C-His |

Properties

| | |
|-----------------------|---|
| Purity | > 95 % as determined by reducing SDS-PAGE. |
| Endotoxin | < 1.0 EU per µg of the protein as determined by the LAL method. |
| Storage | Generally, 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°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| Shipping | This product is provided as lyophilized powder which is shipped with ice packs. |
| Formulation | Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual. |
| Reconstitution | Please refer to the printed manual for detailed information. |

Data



> 95 % as determined by reducing SDS-PAGE.

Background

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 spike (S) glycoprotein of

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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 SARS-CoV-2 (COVID-19 coronavirus, 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.

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