

## Recombinant HCoV-HKU1 (Isolate N5) S1 Protein (His Tag)

Catalog No. PKSV030108

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

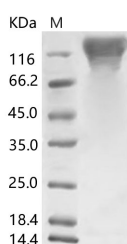
### Description

|                                    |              |
|------------------------------------|--------------|
| <b>Synonyms</b>                    | Spike        |
| <b>Species</b>                     | HCoV-HKU1    |
| <b>Expression Host</b>             | HEK293 Cells |
| <b>Sequence</b>                    | Ala13-Arg756 |
| <b>Accession</b>                   | Q0ZME7.1     |
| <b>Calculated Molecular Weight</b> | 85.2 kDa     |
| <b>Tag</b>                         | C-His        |

### Properties

|                       |   |
|-----------------------|---|
| <b>Purity</b>         | > 85 % as determined by reducing SDS-PAGE.  |
| <b>Endotoxin</b>      | < 1.0 EU per µg of the protein as determined by the LAL method.   |
| <b>Storage</b>        | 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. |
| <b>Shipping</b>       | This product is provided as lyophilized powder which is shipped with ice packs.   |
| <b>Formulation</b>    | Lyophilized from sterile PBS, pH 7.4<br>Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual.           |
| <b>Reconstitution</b> | Please refer to the printed manual for detailed information.  |

### Data



> 85 % 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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