# Recombinant SARS-CoV-2 Spike Protein (RBD-SD1, His Tag)

**Catalog Number:PKSR030477**

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

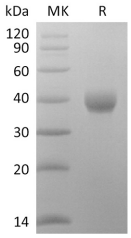
## Description

| | |
|---|---|
| **Synonyms** | 2019-nCov RBD Protein;2019-nCoV S RBD Protein |
| **Species** | SARS-CoV-2 |
| **Expression Host** | HEK293 Cells |
| **Sequence** | Arg319-Ser591 |
| **Accession** | QHD43416.1 |
| **Calculated Molecular Weight** | 31.4 kDa |
| **Observed molecular weight** | 35-43 kDa |
| **Tag** | C-His |
| **Bioactivity** | Immobilized Human ACE-2-Fc(Cat#PKSR030492) at 10μg/ml (100 μl/well) can bind Recombinant 2019-nCoV Spike Protein (RBD-SD1, His Tag) (Cat#PKSR030477). The ED50 of Recombinant Recombinant 2019-nCoV Spike Protein (RBD-SD1, His Tag) (Cat#PKSR030477) is 0.64 ug/ml. |

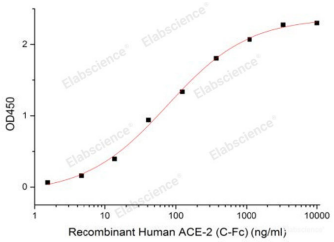
## Properties

| | |
|---|---|
| **Purity** | > 95 % as determined by reducing SDS-PAGE. |
| **Endotoxin** | < 1.0 EU per μg of the protein as determined by the LAL method. |
| **Storage** | Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles. |
| **Shipping** | This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < - 20°C. |
| **Formulation** | Supplied as a 0.2 μm filtered solution of PBS, pH7.4. |
| **Reconstitution** | Not Applicable |

## Data




> 95 % as determined by reducing SDS-PAGE.




Immobilized Human ACE-2-Fc(Cat#PKSR030492) at 10μg/ml (100 μl/well) can bind Recombinant 2019-nCoV Spike Protein (RBD-SD1, His Tag) (Cat#PKSR030477). The ED50 of Recombinant Recombinant 2019-nCoV Spike Protein (RBD-SD1, His Tag) (Cat#PKSR030477) is 0.64 ug/ml.

## 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-

## For Research Use Only


A Reliable Research Partner in Life Science and Medicine

Toll-free: 1-888-852-8623 Tel: 1-832-243-6086 Fax: 1-832-243-6017

Web: www.elabscience.com Email: techsupport@elabscience.com

acetylated sialic acid. The spike is essential for both host specificity and viral infectivity. 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 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.



Toll-free: 1-888-852-8623 Tel: 1-832-243-6086 Fax: 1-832-243-6017

Web: www.elabscience.com Email: techsupport@elabscience.com