

Recombinant SARS-CoV-2 Spike S1 Protein

Catalog No.: RP01261 **Recombinant** **1 Publications**

Sequence Information

Species	Gene ID	Swiss Prot
SARS-CoV-2	43740568	

Tags

C-His&Avi

Synonyms

Envelope;SARS-CoV-2 Spike RBD (N501Y);Spike;Spike ECD;Spike RBD;Spike S1;Spike S2;Spike S2 ECD;S1-RBD protein;NCP-CoV RBD Protein;novel coronavirus RBD Protein;2019-nCoV RBD Protein;S glycoprotein Subunit1 RBD Protein

Product Information

Source

HEK293 cells

Purification

≥ 95 % as determined by SDS-PAGE; ≥ 95 % as determined by HPLC.

Calculated MW

77.67 kDa

Observed MW

110-120 kDa

Endotoxin

< 1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. or Supplied as a 0.22 μm filtered solution in PBS, pH 7.4. Contact us for customized product form or formulation.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

The spike protein (S) of coronavirus (CoV) attaches the virus to its cellular receptor, angiotensin-converting enzyme 2 (ACE2). A defined receptor-binding domain (RBD) on S mediates this interaction. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity.

Basic Information

Description

Recombinant SARS-CoV-2(2019-nCoV) Spike S1 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gln14-Arg683) of SARS-COV-2(2019-nCoV) Spike S1 (Accession #YP_009724390.1) fused with a 6×His tag and Avi at the C-terminus.

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Recombinant SARS-CoV-2 Spike S1 at 2 μg/mL (100 μL/well) can bind recombinant Human ACE2 with a linear range of 0.15-6.85 ng/mL. | 2. Immobilized Human ACE2 on COOH Chip can bind SARS-COV-2 Spike S1 with an affinity constant of 24.5 nM as determined in a SPR assay (Nicoya OpenSPR).

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

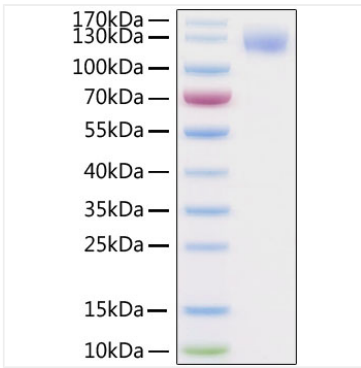
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

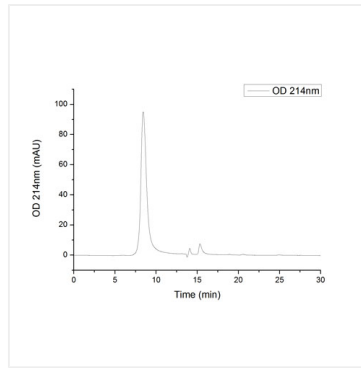
Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

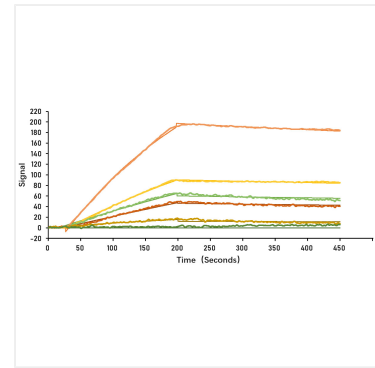
Validation Data



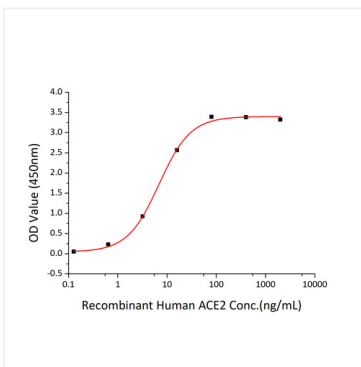
Recombinant SARS-CoV-2 Spike S1 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



The purity of SARS-COV-2 Spike S1 Protein with His and Avi tag (Cat.RP01261) was greater than 95% as determined by SEC-HPLC.



Immobilized Human ACE2 on COOH Chip, can bind SARS-COV-2 Spike S1 with an affinity constant of 24.5 nM as determined in a SPR assay (Nicoya OpenSPR).



Immobilized Recombinant SARS-CoV-2 Spike S1 at 2 μ g/mL (100 μ L/well) can bind recombinant Human ACE2 with a linear range of 0.15-6.85 ng/mL.