

Recombinant SARS-CoV-2 Spike S1 Protein

Catalog No.: RP01262 **Recombinant** **7 Publications**

Sequence Information

Species SARS-CoV-2 **Gene ID** 43740568 **Swiss Prot**

Tags

C-His

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** >90% by SDS-PAGE;> 95% by HPLC

Endotoxin

< 1.0 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.

Contact

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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 (Val16-Arg685) of SARS-COV-2(2019-nCoV) Spike S1 (Accession #YP_009724390.1) fused with a 6×His tag 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 0.5-8.7 ng/mL. 2. Immobilized Human ACE2 on COOH Chip can bind SARS-COV-2 Spike S1 with an affinity constant of 11.4 nM as determined in a SPR assay (Nicoya OpenSPR).

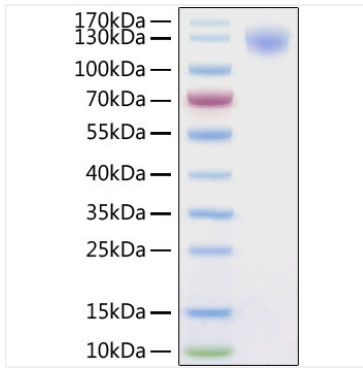
Storage

Store the lyophilized protein at -20°C to -80 °C for long term. After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week. or This product is stable at ≤ -70°C for up to 6 months from the date of receipt. For optimal storage, aliquot into smaller quantities after centrifugation and store at recommended temperature. Avoid repeated freeze/thaw cycles.

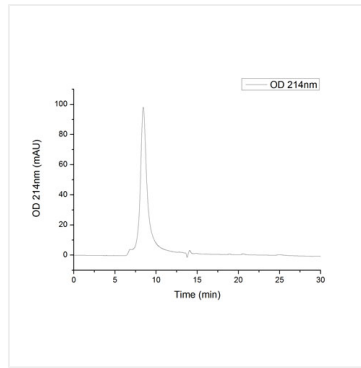


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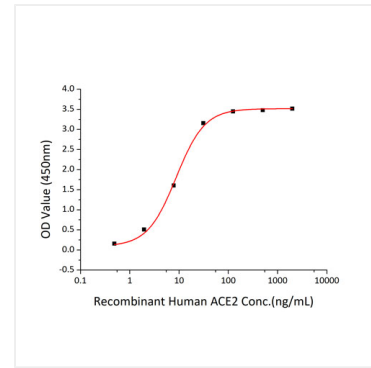
Validation Data



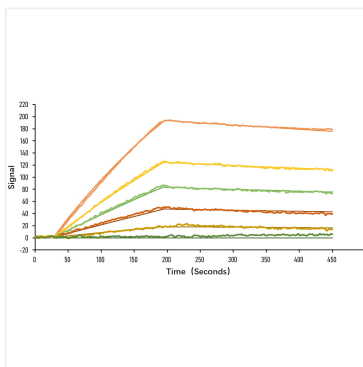
Recombinant SARS-CoV-2 Spike S1 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 110-130 kDa.



The purity of SARS-CoV-2 Spike S1 Protein with His tag (Cat.RP01262) was greater than 95% as determined by SEC-HPLC.



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 0.5-8.7 ng/mL.



Immobilized Human ACE2 on COOH Chip, can bind SARS-CoV-2 Spike S1 with an affinity constant of 11.4 nM as determined in a SPR assay (Nicoya OpenSPR).