

Recombinant SARS-CoV-2 Spike S1 Protein

Catalog No.: RP01259 **Recombinant**

Sequence Information

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

Tags

C-hFc&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.

Endotoxin

< 0.1 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 (Val11-Arg682) of SARS-COV-2(2019-nCoV) Spike S1 (Accession #YP_009724390.1) fused with an Fc, 6xHis tag at the C-terminus.

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human ACE2 at 2 μg/mL (100 μL/well) can bind Recombinant SARS-CoV-2 Spike S1, the EC₅₀ of SARS-COV-2 Spike S1 is 6.79 ng/mL. 2. Immobilized Human ACE2 on COOH Chip can bind SARS-COV-2 Spike S1 with an affinity constant of 90.8 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.

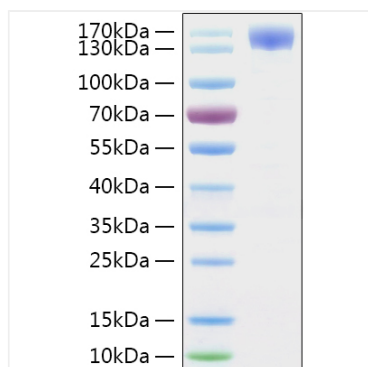
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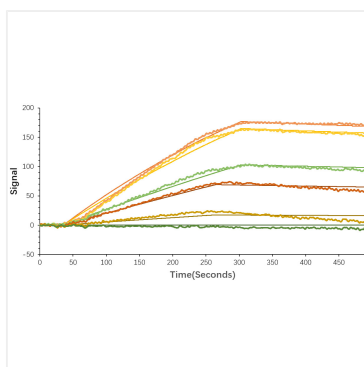
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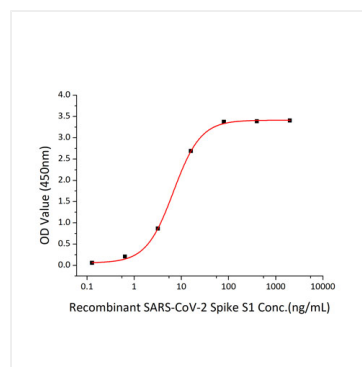
Validation Data



Recombinant SARS-CoV-2 Spike S1 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 130-160 kDa.



Immobilized Human ACE2 on COOH Chip, can bind SARS-COV-2 Spike S1 with an affinity constant of 90.8 nM as determined in a SPR assay (Nicoya OpenSPR).



Immobilized Recombinant Human ACE2 at 2 μ g/mL (100 μ L/well) can bind Recombinant SARS-COV-2 Spike S1, the EC_{50} of SARS-COV-2 Spike S1 is 6.79 ng/mL.