

Recombinant SARS-CoV-2 S Protein, His-tagged

Cat. No. S-20S Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant 2019-nCoV S-trimer Protein is produced by our Mammalian expression system and the target gene encoding Cys15-Gln1208 is expressed with a 6His tag at the C-terminus. Proline substitutions (K986P, V987P), and G/S substitutions (R682G, R683S, R685S) are introduced to stabilize the trimeric prefusion state of Spike protein and remove the furin cleavage site, respectively.
Species	SARS-CoV-2
Source	Human Cells
Description	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. Most notable is severe acute respiratory syndrome (SARS). The severe acute respiratory syndrome-coronavirus (SARS-CoV) spike (S) glycoprotein alone can mediate the membrane fusion required for virus entry and cell fusion. It is also a major immunogen and a target for entry inhibitors. It's been reported that 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.
Form	Supplied as a 0.2 µm filtered solution of PBS, pH 7.4.

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Molecular Mass	Predicted Molecular Weight: 136.6kDa Apparent Molecular Weight: 170-220kDa, reducing conditions.
AA Sequence	Cys15-Gln1208
Endotoxin	NA
Purity	> 95%
Usage	Research Use Only
Storage	Store at ≤-70 centigrade, stable for 6 months after receipt. Store at ≤-70 centigrade, stable for 3 months under sterile conditions after opening. Please minimize freeze-thaw cycles.
Shipping	The product is shipped on dry ice pack. Upon receipt, store it immediately at the temperature listed below.

GENE INFORMATION

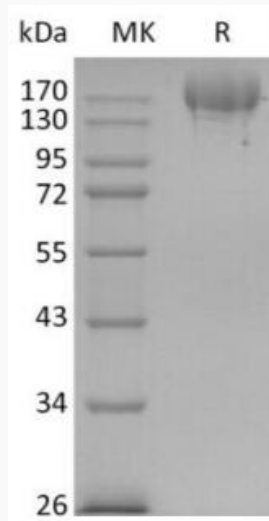
Gene Name	S surface glycoprotein [Severe acute respiratory syndrome coronavirus 2]
Official Symbol	S
Synonyms	2019-nCov S protein; 2019-nCoV Spike glycoprotein; 2019-nCoV S glycoprotein
Gene ID	43740568
Protein Refseq	YP_009724390.1
UniProt ID	P0DTC2

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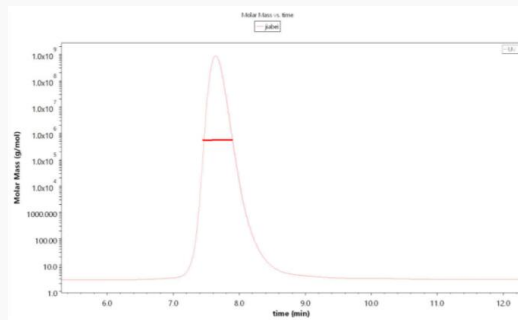
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SDS-PAGE



Greater than 95% as determined by reducing SDS-PAGE.



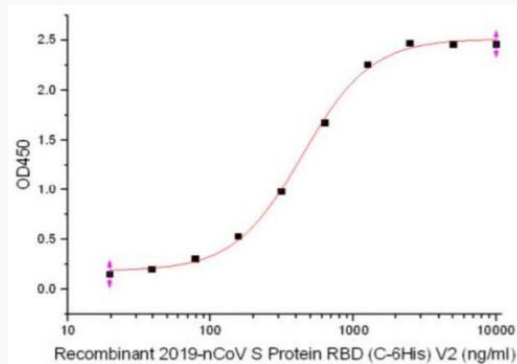
2019-nCoV S-trimer Protein (C-6His) molecular mass was tested by SEC-MALS around 550-670 kDa and the purity was more than 90%.

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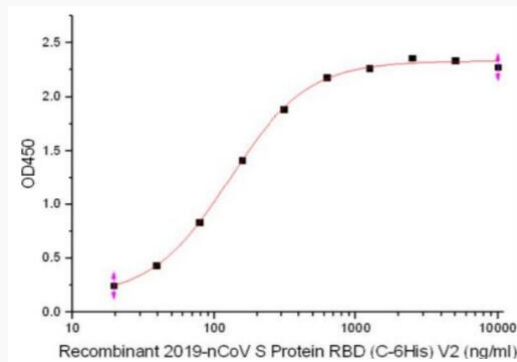
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Bioactivity



Immobilized 2019-nCoV S Protein RBD-His V2 at 5µg/ml (100 µl/well) can bind Human ACE-2-Fc. The ED50 of Recombinant Human ACE-2- Fc is 417 ng/ml.

Bioactivity



Immobilized 2019-nCoV S Protein RBDHis V2 at 5µg/ml (100 µl/well) can bind Anti-2019-nCoV S1 mAb (5D9). The ED50 of Anti-2019-nCoV S1 mAb (5D9) is 117 ng/ml.

Stability

Stability testing is performed in the product buffer to see whether different temperatures affect the antigen binding. The result showed that product bioactivity is no significant differences after storage for 14 days at 4 centigrade or 25 centigrade.

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