

Recombinant SARS-CoV-2 S Protein

Cat. No. S-142S Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant SARS-CoV-2 Spike Protein is produced by Insect. The target gene encoding 319-532 is expressed.

Species

SARS-CoV-2

Source

Insect Cells

Description

SARS-CoV-2 Spike Protein is glycoprotein and expressed in many cell types supporting its reported involvement in multiple biological processes that include coagulation, apoptosis, cancer development and progression, and the innate immune response. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2, DPP4, CEACAM, etc. 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.

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Form	Lyophilized from a 0.2 um filtered solution of PBS, pH7.4.
Molecular Mass	Predicted Molecular Weight: 24kDa Apparent Molecular Weight: 30kDa, under reducing conditions.
AA Sequence	319-532 aa
Endotoxin	Less than 0.1 ng/ug (1 EU/ug).
Purity	>95%
Storage	Store at < -20 centigrade, stable for 6 months after receipt. Please minimize freeze-thaw cycles.
Quality Statement	Purity: greater than 95% as determined by reducing SDS-PAGE.
Shipping	The product is shipped at ambient temperature. 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	Spike glycoprotein; S protein; S1 subunit; Host Cell Receptor Binding Domain (RBD); E2; Peplomer protein
Gene ID	43740568
Protein Refseq	YP_009724390.1

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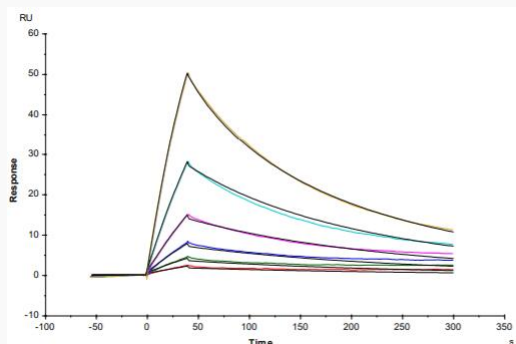
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UniProt ID

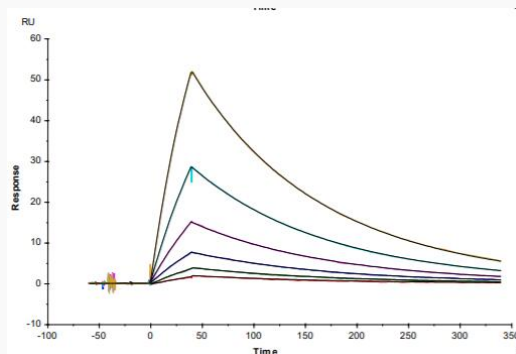
P0DTC2

Bioactivity (SPR)



Human ACE-2, His tag captured on chip can bind to SARS-CoV-2 Spike Protein RBD-His with an affinity constant (KD) value of 9.19nM.

Bioactivity (SPR)



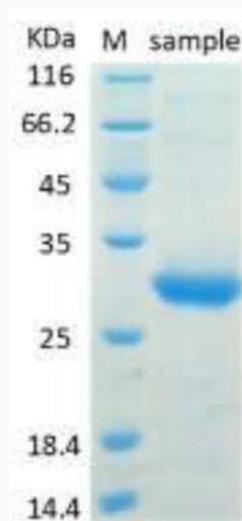
Human ACE-2, Fc tag captured on chip can bind to SARS-CoV-2 Spike Protein RBD-His with an affinity constant (KD) value of 23.6nM.

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SDS-PAGE



Sample under reducing conditions

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