SARS-COV-2 Spike RBD (N501Y) Protein

Cat. No. COV-VM1BY

Description

Source	Recombinant SARS-COV-2 Spike RBD (N501Y) Protein is expressed from HEK293 with His tag at the C-Terminus.
	It contains Arg319-Phe541(N501Y).
Accession	QHD43416.1
Molecular Weight	The protein has a predicted MW of 26.2 kDa. Due to glycosylation, the protein migrates to 36-40 kDa based on Bis-Tris PAGE result.
Endotoxin	Less than 1EU per μg by the LAL method.
Purity	> 95% as determined by Bis-Tris PAGE
	> 95% as determined by HPLC

Formulation and Storage

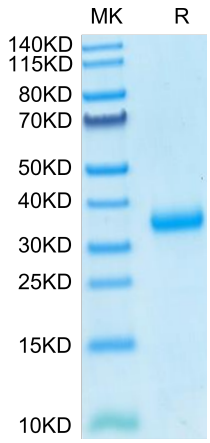
Formulation	Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 μg/ml is recommended. Dissolve the lyophilized protein in distilled water.
Storage	-20 to -80°C for 12 months as supplied from date of receipt.-80°C for 3 months after reconstitution.Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

Background

The ongoing coronavirus disease 2019 (COVID-19) pandemic has prioritized the development of small-animal models for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The resulting mouse-adapted strain at passage 6 (called MASCp6) showed increased infectivity in mouse lung and led to interstitial pneumonia and inflammatory responses in both young and aged mice after intranasal inoculation. Deep sequencing revealed a panel of adaptive mutations potentially associated with the increased virulence. In particular, the N501Y mutation is located at the receptor binding domain (RBD) of the spike protein.

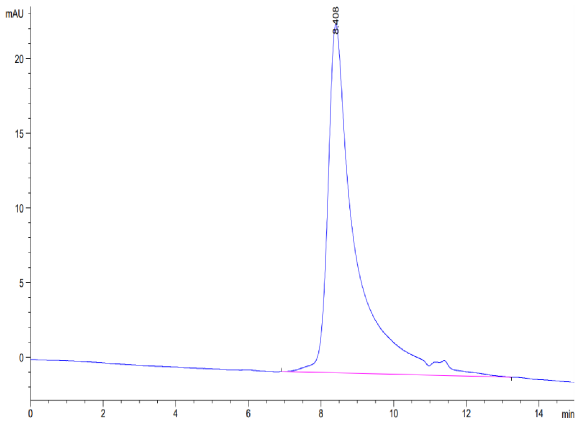
Assay Data

Bis-Tris PAGE



SARS-COV-2 Spike RBD (N501Y) on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

SEC-HPLC



The purity of SARS-COV-2 Spike RBD (N501Y) is greater than 95% as determined by SEC-HPLC.

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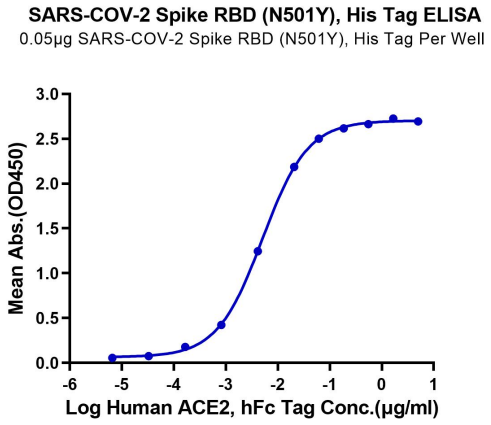
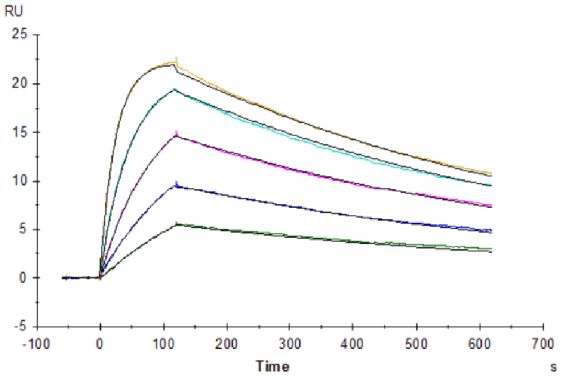
Assay Data

ELISA Data



Immobilized SARS-COV-2 Spike RBD (N501Y) , His Tag at 0.5μg/ml (100μl/Well) on the plate. Dose response curve for Human ACE2, hFc Tag with the EC50 of 5.1ng/ml determined by ELISA (QC Test).

SPR Data



Human ACE2 captured on Protein A chip, can bind SARS-COV-2 Spike RBD (N501Y) , His Tag with an affinity constant of 1.74nM as determined in a SPR assay (Biacore T200).