Recombinant SARS-COV-2 Spike RBD (N501Y, K417N, E484K) Protein (His Tag)

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Description

Protein Sequence	SARS-COV-2 Spike RBD (N501Y, K417N, E484K) protein is expressed from mammalian with a His tag at the C-terminal. It contains Arg319-Phe541 (N501Y, K417N, E484K).
Source	Mammalian Expression System
Accession	QHD43416.1
Mol wt	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 ug by the LAL method.
Purity	> 95% as determined by Bis-Tris PAGE >95%as determined by SEC-HPLC
Activity assay	ELISA

Formulation and Storage

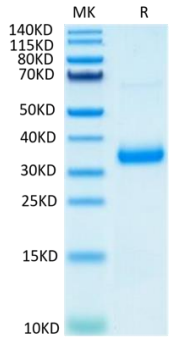
Formulation	Lyophilized from 0.22um filtered solution in 20mM PB (pH 7.4). Normally 5% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge tubes before opening. Reconstituting to a concentration more than 100 μg/ml is recommended. Dissolve the lyophilized protein in distilled water.
Storage	The product should be stored at -70℃ or -20℃.

Background

SARS-CoV-2 exploits angiotensin-converting enzyme 2 (ACE2) as a receptor to invade cells. It has been reported that the UK and South African strains may have higher transmission capabilities, eventually in part due to amino acid substitutions on the SARS-CoV-2 Spike protein.The results of a study show the N501Y replacement in this region of the interface (present in both the UK and South African strains) should be favorable for the interaction with ACE2, while the K417N and E484K substitutions (South African strain) would seem neutral or even unfavorable.

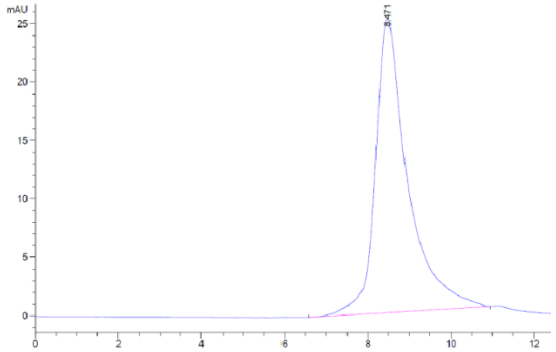
Assay Data

Tris-Bis PAGE



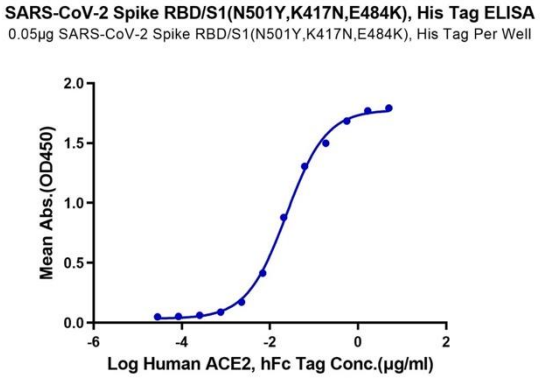
Recombinant SARS-CoV-2 Spike RBD (N501Y, K417N, E484K) on Tris-Bis PAGE under reduced condition. The purity is greater than 95%.

HPLC Data



The purity of 2019-nCoV Spike RBD is greater than 95% as determined by SEC-HPLC.

ELISA Data



Immobilized SARS-COV-2 Spike RBD (N501Y, K417N, E484K) at 0.5μg/ml (100μl/Well) on the plate. Dose response curve for Human ACE2 , hFc Tag with the EC50 of 0.48μg/ml determined by ELISA.

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.