SARS-CoV-2 Spike S1 protein

Receptor binding domain (RBD)

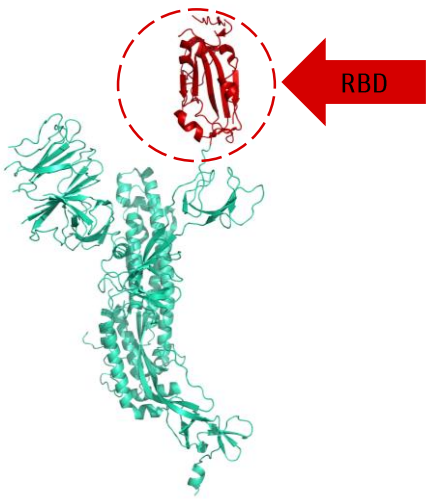
Cat. no. P2020-026

Product Information

Protein:	SARS-CoV-2 S1(RBD, short), His-tag (~ 24.0 kDa)
Sequence:	MPNITNLCPFGEVFNATRFASVYAWNRKRISNCVADYSVLYNSASFSTFKCYGVSPTKLN DLCFTNVYADSFVIRGDEVRQIAPGQTGKIADYNYKLPDDFTGCVIAWNSNNLDSKVGGN YNYLYRLFRKSNLKPFERDISTEIYQAGSTPCNGVEGFNCYFPLQSYGFQPTNGVGYQPY RVVVLSFELLHAPATVCGPKKSTN Methionin at pos. 1 present due to cloning constraints, C-terminal His-tag not shown in sequence.
Source:	Recombinantly expressed in HEK293 cells.
Tag(s):	His-tag, C-terminal
Purification:	Purified by affinity chromatography and subsequent buffer exchange.
Formulation:	PBS; pH 7.4 Liquid, stored and shipped at -80 °C.
Purity:	> 90 % (will be determined by densitometry of Coomassie stained gel, example next page)
Concentration:	Will be determined by BCA-Assay.
Long-term storage:	No recommendations.
Comment:	Protein migrates at higher molecular weight during SDS-PAGE due to posttranslational modifications.

Background Information:

The spike (S) glycoprotein of coronaviruses is essential for binding of the virus to the host cell at the beginning of the infection process. The severe acute respiratory syndrome-coronavirus (SARS-CoV) spike (S) glycoprotein is responsible for membrane fusion and is therefore required for virus entry and cell fusion. The target protein is also a major immunogen and a possible target for entry inhibitors.
The SARS-CoV-2 spike (S) protein is a large type I transmembrane protein composed of two subunits, S1 and S2. The S1 subunit contains a receptor-binding domain (RBD) responsible for binding to the host cell receptor angiotensin-converting enzyme 2 (ACE2). The S2 subunit mediates fusion between the viral and host cell membranes. The S1 RBD protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity.



Structural model of the spike protein of SARS-CoV-2 with its receptor binding domain (RBD) highlighted (red).

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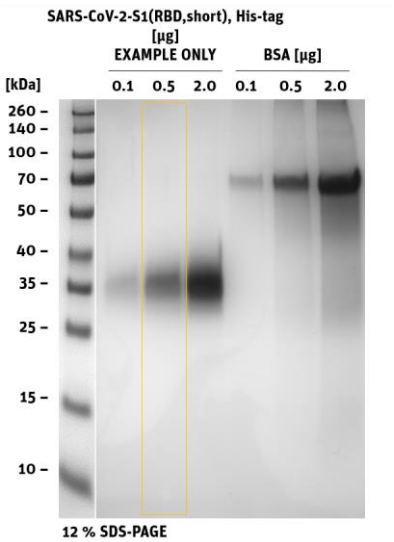
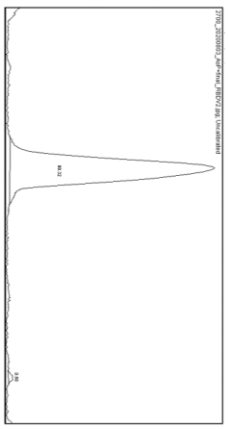
Product Information

Quality Information (provided for each lot):



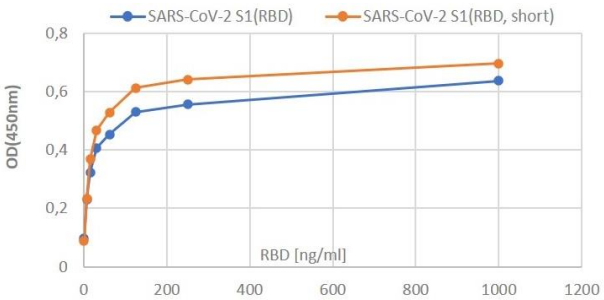
SDS-PAGE/Coll.Coomassie



	Area	Percent
1	19812.095	99.323
2	135.142	0.677

Histogram (of marked lane in gel picture)

Activity Information (general information, not lot specific):



Activity of different SARS-CoV-2 S1 (RBD) variants in comparison: Cat. No. P2020-001 (Spike S1 (RBD)) and Cat. No. P2020-026 (Spike S1 (RBD, short)). Sandwich-ELISA with antibodies from Sino Biological Europe GmbH (coat: #40150-D003 and detection: #40150-D001-H).