SARS-CoV-2 Spike S1 protein

Receptor binding domain (RBD) – GFP fusion

Cat. no. P2020-031



Product Information

Protein: SARS-CoV-2 S1(RBD), GFP/His-tag (~ 55.5 kDa)

Sequence: MRVQPTESIVRFPNITNLCPFGEVFNATRFASVYAWNRKRISNCVADYSVLYNSASFSTF

KCYGVSPTKLNDLCFTNVYADSFVIRGDEVRQIAPGQTGKIADYNYKLPDDFTGCVIAWN SNNLDSKVGGNYNYLYRLFRKSNLKPFERDISTEIYQAGSTPCNGVEGFNCYFPLQSYGF

QPTNGVGYQPYRVVVLSFELLHAPATVCGPKKSTNLVKNKCVNF

Methionine at pos. 1 present due to cloning constraints, N-terminal His-tag as well as

C-terminal GFP not shown in sequence.

Source: Recombinantly expressed in HEK293 cells.

Tag(s): His-tag, N-terminal and GFP, C-terminal

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Purification: Purified by affinity chromatography and subsequent buffer exchange.

Formulation: PBS; pH 7.4

Liquid, stored and shipped at -80 °C.

Purity: > 85 % (will be determined by densitometry of Coomassie stained gel, example next page)

Concentration: Will be determined by BCA-Assay.

Long-term storage: No recommendations.

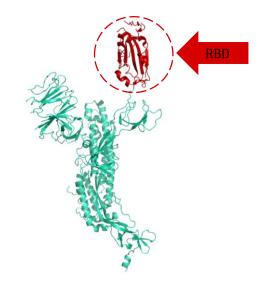
Comment: Protein migrates at higher molecular weight during SDS-PAGE due to posttranslational

modifications. Protein is fused at C-terminus with GFP.

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).

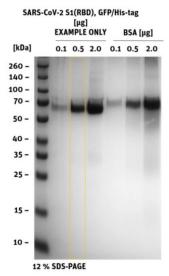
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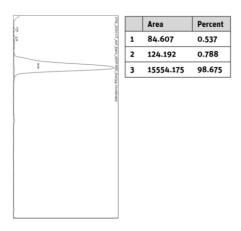


Product Information

Quality Information (provided for each lot):



SDS-PAGE/Coll.Coomassie



Histogram (of marked lane in gel picture)