

# SARS-CoV-2 Spike S1 protein

Receptor binding domain (RBD), tag-free

Cat. no. P2020-022

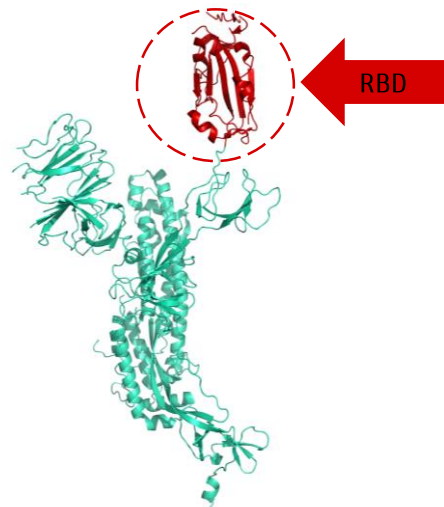
## Product Information

Protein:	SARS-CoV-2 S1(RBD), tag-free (~ 25.2 kDa)
Sequence:	MRVQPTESIVRFPNITNLCPFGEVFNATRFASVYAWNRKRISNADVSVLYNSASFSTFKCYGVSPSTKLNLDLCFTNYYADSFVIRGDEVQRQIAPGQTGKIADYNYKLPDDFTGCVIAWN SNNLDSKVGGNYYLYRFLFRKSNLKPFRDISTEIQAGSTPCNGVEGFNCYFPLQSYGF QPTNGVGYQPYRVVLSFELLHAPATVCGPKKSTNLVKNKCVNF
	Methionin at pos. 1 present due to cloning constraints.
Source:	Recombinantly expressed in CHO cells.
Tag(s):	tag-free
Purification:	Purified by three step purification process 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).*

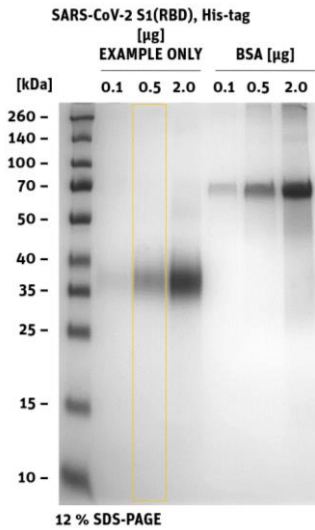
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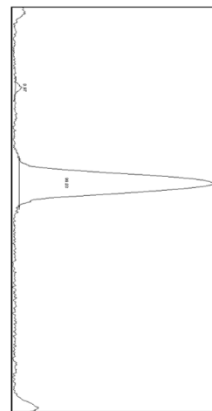
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## Product Information

Quality Information (provided for each lot):

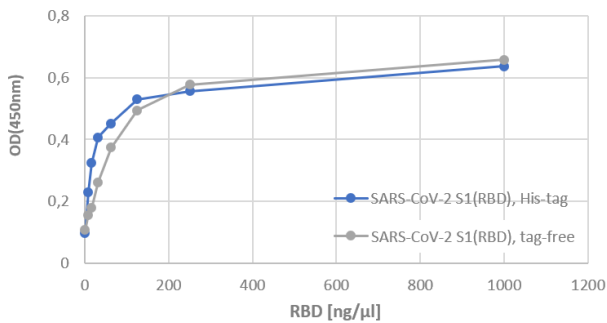


SDS-PAGE/Coll.Coomassie

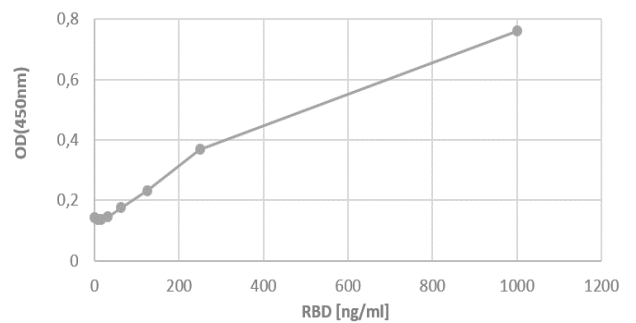


Histogram (of marked lane in gel picture)

Activity Information (general information, not lot specific):



S1(RBD) with and without His-tag are active.



RBD (tag-free) binds ACE2 detected by monoclonal antibody CR3022 (conformational antibody).