

SARS-CoV-2 Spike S1 protein [Expressed in HEK293 cell]

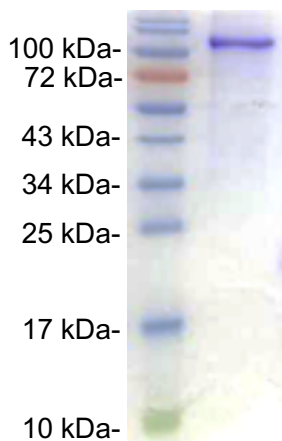
Origin: Recombinant
Source: HEK293
Tag: His at C-terminus
Cat No. 41A230
Size: 100 µg
Purity: >95%
Endotoxin: <5 EU/mg, determined by the LAL method

Introduction to the molecule

The spike (S) glycoprotein of SARS-CoV-2, which is highly exposed on the viral surface, plays a major role in inducing neutralizing antibody, T cell responses and protective immunity. The S protein contains two subunits: S1 and S2 cleaved by furin in host cells. S1 mediates the interaction of SARS-CoV-2 to the host cell receptor (ACE2) through its receptor-binding domain and is the target of vaccine development.

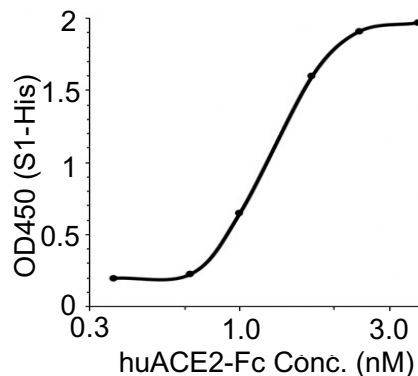
Product information

The recombinant SARS-CoV-2 Spike S1 Protein (YP_009724390.1) (Val16-Arg685) with C-terminal His-tag consists of 681 amino acids. Its predicted molecular mass of 77 kDa. The apparent molecular mass of S1 in SDS-PAGE is around 120 kDa, probably due to glycosylation. The concentration of protein was determined by BCA.

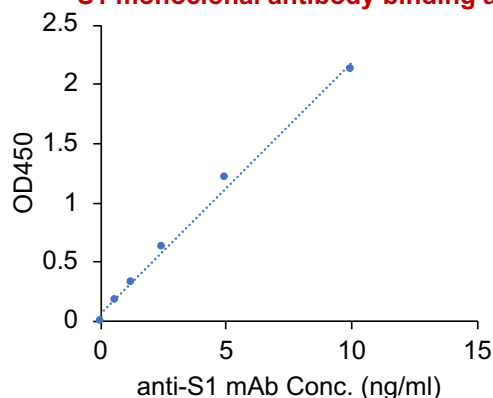


Bioactivity & antigenicity: Strong binding ability with human ACE2 protein and binding capacity to a human anti-S1 monoclonal antibody (determined by ELISA).

Human ACE2 binding assay



S1 monoclonal antibody binding assay



Formulation and storage: Lipid in PBS, PH7.4. Store at -80°C. Recommend to aliquot the protein into smaller quantities. Avoid repeated freeze-thaw cycles.

Reference

- Shajahan A, *et al.* (2020) Deducing the N- and O-glycosylation profile of the spike protein of novel coronavirus SARS-CoV-2. bioRxiv, <https://doi.org/10.1101/2020.04.01.020966>.
- Walls, A C, *et al.* (2020) Structure, Function, and Antigenicity of the SARS-CoV-2 Spike Glycoprotein. *Cell*, 181(2), 281-292.e6. <https://doi.org/10.1016/j.cell.2020.02.058>.

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