

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

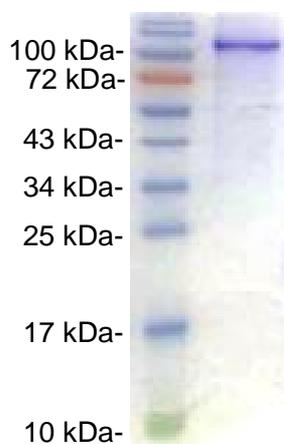
**Origin:** Recombinant  
**Source:** HEK293  
**Tag:** His at C-terminus  
**Cat No.** 41A230  
**Size:** 100 µg  
**Purity:** >95%  
**Endotoxin:** <5 EU/mg, determined by the LAL method

### 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.

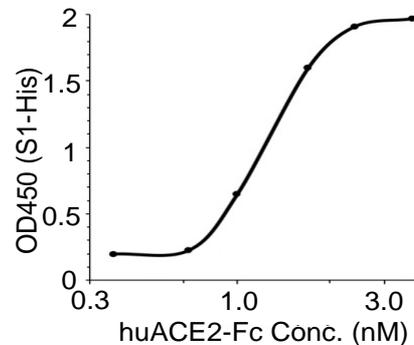
### Product information

The recombinant SARS-CoV-2 Spike S1 Protein (YP\_009724390.1) (Val116-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.

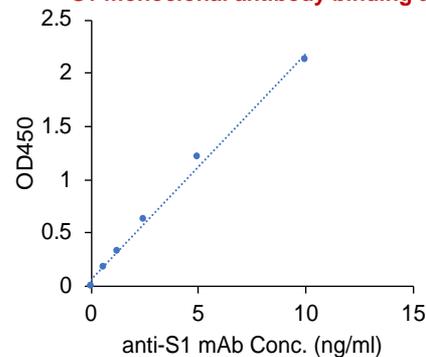


**Bioactivity & antigenicity:** Strong binding ability with human ACE2 protein and binding capacity to a human anti-S1 monoclonal antibody (determined by ELISA).

### Human ACE2 binding assay



### S1 monoclonal antibody binding assay



### Formulation, Reconstitution and storage:

Lyophilized from sterile PBS, pH 7.4. Lyophilized protein can be stored at 2°C to 8°C for short-term, and at -20°C to -80°C for long term store. For reconstitution, add 100 µl of deionized water, mix gently and incubate the reconstituted product for 10 minutes at room temperature prior to use. Reconstituted protein should be kept at -20°C to -80°C. Avoid repeated freeze-thaw cycles.

### Reference

1. 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>.
2. 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>.