

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

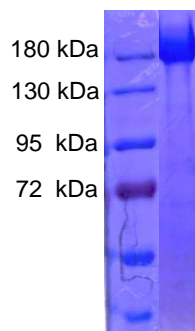
**Origin:** Recombinant  
**Source:** CHO cells  
**Tag:** His at C-terminus  
**Cat No.** 41A252  
**Size:** 100 µg  
**Purity:** >95%  
**Endotoxin:** <5 EU/mg, determined by the LAL method

### Introduction to the molecule

The spike (S) glycoprotein of SARS-CoV-2 is a large trimeric class I fusion protein that is metastable and difficult to produce recombinantly in large scale. Here, we used plasmid with six beneficial proline substitutions modification to generate HexaPro Spike protein with better stability. Using cryo-EM, the structure of HexaPro spike protein is confirmed to retain the prefusion spike confirmation. Since S protein mediates the interaction of SARS-CoV-2 to the host cell receptor (ACE2), a stabilized prefusion spike protein can be used for the development of serological diagnostics and vaccines for SARS-CoV-2.

### Product information

The recombinant SARS-CoV-2 HexaPro Spike Protein comprises residues 1-1208 (GenBank: MN908947) with C-terminal His-tag. The apparent molecular mass of HexaPro S in SDS-PAGE is approximately 180 kDa. The concentration of protein was determined by BCA.



**Bioactivity & antigenicity:** Strong binding ability with antibodies against SARS-CoV-2 S protein (determined by ELISA).

	Spike protein
Blank	0.16
COVID-19 patients (1:100 dilution)	6.371
	6.468
	6.691

The value each column is  $OD_{450}$

### Formulation, Reconstitution and storage:

Liquid in sterile PBS, pH 7.4. The HexaPro protein can be stored at 2°C to 8°C for short-term (<1 week), and at -20°C to -80°C for long term store. Avoid repeated freeze-thaw cycles.

### Reference

1. Hsieh CL, *et al.* (2020) Structure-based Design of Prefusion-stabilized SARS-CoV-2 Spikes bioRxiv, <https://www.biorxiv.org/content/10.1101/2020.05.30.125484v1>.
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>.