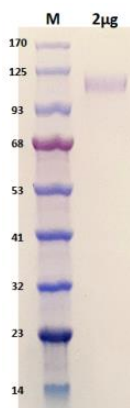


## Human CellExp™ SARS-CoV-2 S1 Protein (Delta Plus), Recombinant

<b>CATALOG NO:</b>	P1677-10 10 µg P1677-50 50 µg
<b>ALTERNATE NAMES:</b>	Delta variant S1 Protein, Spike glycoprotein subunit 1, Lineage B.1.617.2, SARS-CoV-2 S1 Protein
<b>MOL. WT.</b>	~120 kDa (8xHis tag at the C-terminus)
<b>SOURCE:</b>	HEK 293 cells
<b>PURITY:</b>	> 95% by SDS-PAGE
<b>FORM:</b>	Lyophilized
<b>FORMULATION:</b>	Lyophilized from 0.22 µm filtered PBS (pH 7.4) with 5% trehalose
<b>RECONSTITUTION:</b>	Centrifuge the vial prior to opening. Reconstitute in sterile PBS (pH 7.4). Do not vortex.
<b>STORAGE CONDITIONS:</b>	Store at -20 °C. Once reconstituted, aliquot and store at -20 °C or -70 °C. Avoid repeated freezing and thawing cycles.

**DESCRIPTION:** SARS-CoV-2, the causative virus of COVID-19, uses the viral Spike (S) protein for host cell attachment and entry. The virus uses multiple factors including the human protease Furin, Angiotensin converting enzyme 2 (ACE2), Neuropilin-1 (NRP1) and the transmembrane protease serine 2 (TMPRSS2) for receptor interactions. The S protein has two domains S1 and S2, where S1 facilitates initial binding to the receptor and the S2 domain drives the membrane fusion and eventual entry of the virus. The S glycoprotein serves as an important target for monoclonal antibodies, entry inhibitors, and vaccines. Within the S1 protein, the conserved receptor-binding domain (RBD) binds with a high affinity for ACE2. Of the new emerging strains, SARS-CoV-2 Delta variant (lineage B.1.617.2) has become the dominant strain spreading globally. According to CDC, the Delta variant is more infectious and spreads faster than earlier forms of the virus. The Delta variant S1 domain harbors mutations including (but not limited to): T19R, G142D, E156-, F157-, R158G, K417N, L452R, T478K, D614G and P681R. Out of the several mutations found in the Delta variant, the four spike protein amino acid substitutions (L452R, T478K, D614G, P681R) are of most concern and thought to be the main attributes to the variant's increased infectivity. Additionally, the Delta variant with the K417N spike mutation has been named "Delta Plus" or "Nepal variant." This K417N mutation is also present in the Beta variant.

**AMINO ACID SEQUENCE:** Val 16 to Arg 683 (with substitutions at positions T19R, G142D, R158G, K417N, L452R, T478K, D614G and P681R, and deletions of E156 and F157)



**SDS-PAGE (4-20%) of Recombinant SARS-CoV-2 S1 Protein (Delta Plus):** 2 µg of the recombinant protein is loaded under reducing (R) conditions and stained with Coomassie Blue. The protein migrates to around ~120 kDa due to glycosylation.

### RELATED PRODUCTS:

- SARS-CoV-2 S1 Protein-ACE2 Binding Inhibitor Screening Kit (Cat. No. K2050)
- Human CellExp™ SARS-CoV-2 S1 Protein (D614G) (Cat. No. P1652)
- Human CellExp™ SARS-CoV-2 S1 (L452R), Recombinant (Cat. No. P1662)
- Human CellExp™ SARS-CoV-2 S1 (K417N), Recombinant (Cat. No. P1663)
- Human CellExp™ SARS-CoV-2 S1 (E484K), Recombinant (Cat. No. P1664)
- Human CellExp™ SARS-CoV-2 S1 (N501Y), Recombinant (Cat. No. P1665)
- SARS-CoV-2 IgM ELISA Kit (Cat. No. E4902)
- SARS-CoV-2 IgG ELISA Kit (Cat. No. E4901)

**FOR RESEARCH USE ONLY! Not to be used on humans.**