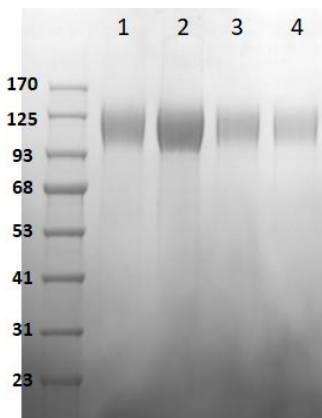


Human CellExp™ SARS-CoV-2 S1 (N501Y), Recombinant

CATALOG NO:	P1665-10 10 µg P1665-50 50 µg
ALTERNATE NAMES:	S1 Protein, Spike glycoprotein subunit1, S glycoprotein subunit1, SARS-CoV-2 S1 Protein
MOL. WT.	~120 kDa (8xHis tag at the C-terminus)
SOURCE:	HEK 293 cells
PURITY:	> 95% SDS-PAGE
FORM:	Lyophilized
FORMULATION:	Lyophilized from 0.22 µm filtered PBS (pH 7.4) with 5% trehalose.
RECONSTITUTION:	Centrifuge the vial prior to opening. Reconstitute in sterile PBS (pH 7.4). Do not vortex.
STORAGE CONDITIONS:	Store lyophilized protein at -20 °C. Once reconstituted, aliquot and store at -20 °C or -70 °C. Avoid repeated freeze-thaw 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 host targets including the human protease Furin, Angiotensin converting enzyme 2 (ACE2), Neuropilin-1 (NRP1) and the transmembrane protease serine 2 (TMPRSS2) for host cell entry. 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. Recently, increasing concern has been garnered over the discovery of new SARS-CoV-2 variants with the ability to escape antibody-mediated protection either by previous infection or vaccination. The N501Y mutation, which occurs in the RBD, is a substitution from an asparagine (N) to tyrosine (Y) at position 501. The N501Y mutation can be found in the B.1.1.7 (U.K), B.1.351 (South African) and P.1 (Brazil) strains. Currently, the U.K. variant is of the highest concern with known attributes including 50% increased transmission, increased severity based on hospitalizations and case fatality rates, and a moderate impact on neutralization by monoclonal antibody therapeutics and convalescent/post-vaccination sera.

AMINO ACID SEQUENCE: Val 16 - Arg 685



SDS-PAGE (4-20%) of Recombinant SARS-CoV-2 S1 Protein: 3 µg of the recombinant protein was loaded under reducing conditions and stained with Coomassie Blue. The protein migrates to around ~120 kDa due to glycosylation.

- 1) SARS-CoV-2 S1 (K417N) Cat# P1663
- 2) SARS-CoV-2 S1 (L452R) Cat# P1662
- 3) SARS-CoV-2 S1 (E484K) Cat# P1664
- 4) SARS-CoV-2 S1 (N501Y) Cat# P1665

RELATED PRODUCTS:

- Human CellExp™ SARS-CoV-2 S1 Protein (D614G) (P1652)
- Furin, Human Recombinant (Cat. No. P1658)
- Human CellExp™ ACE2, Human Recombinant (P1535)
- Human CellExp™ SARS-CoV-2 Spike Protein (RBD 310-568) (P1543)
- Human CellExp™ SARS-CoV-2 Nucleoprotein, Recombinant (P1554)
- SARS-CoV-2 S1 Protein-ACE2 Binding Inhibitor Screening Kit (K2050)
- Angiotensin II Converting Enzyme (ACE2) Inhibitor Screening Kit (K310)

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