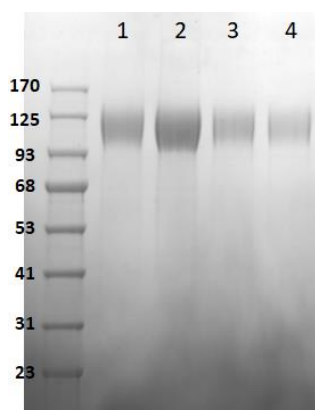


Human CellExp™ SARS-CoV-2 S1 (L452R), Recombinant

CATALOG NO:	P1662-10 10 µg P1662-50 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% by 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, fast-spreading variants were identified in UK, South Africa, and Brazil. In November 2020, the CAL.20C or B.1.429 strain was identified throughout California, which contained the L452R mutation, a substitution from a leucine (L) to arginine (R) in the RBD. Due to this change, the California strain is reported to be roughly 20% more contagious. Additionally, the CDC reports a significant impact on neutralization by some, but not all, therapeutics and a moderate reduction in neutralization using convalescent and 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) (Cat. No. P1652)
- Furin, Human Recombinant (Cat. No. P1658)
- Human CellExp™ ACE2, Human Recombinant (Cat. No. P1535)
- Human CellExp™ SARS-CoV-2 Spike Protein (RBD 310-568) (Cat. No. P1543)
- Human CellExp™ SARS-CoV-2 Nucleoprotein, Recombinant (Cat. No. P1554)
- SARS-CoV-2 S1 Protein-ACE2 Binding Inhibitor Screening Kit (Cat. No. K2050)
- Angiotensin II Converting Enzyme (ACE2) Inhibitor Screening Kit (Cat. No. K310)

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