Recombinant SARS-CoV-2 S1 Subunit Protein RBD, T478K mutant

Source

- **Species** SARS-CoV-2 Delta B.1.617.2 (India)
- **Gene Symbols** S
- **Accession Number** QHD43416
- **Expressed Region** Arg319-Phe541. T478K mutant: amino acid Thr (T) at 478 position was mutated to Lys (K).
- **Synonyms** Spike protein, S Protein, S1 Subunit, Host Cell Receptor Binding Domain (RBD)

Preparation

- **Expression System** Human embryonic kidney 293 (HEK293) cells
- **Tag** *C*-terminal his-tag
- **Purification** His-tag affinity purification by immobilized metal ion affinity chromatography (IMAC)
- **Purity** >95%
- **Endotoxin Level** <0.5 EU per μg of the protein as determined by the LAL method
- **Purity determined** By SDS-PAGE under reducing conditions and visualized by Coomassie blue staining
- **Molecular Weight** Recombinant protein product has a calculated molecular mass of ~25 kDa. Due to the abundant glycosylation, it migrates as approximately ~30 kDa protein bands in SDS-PAGE under DTT, beta-mercaptoethanol reducing conditions. After deglycosylation under native and denature conditions, the protein presented as one reduced ~25 kDa band.

Protein Specifications

- **Format** Liquid
- **Formulation** Supplied as a 0.2 μm filtered solution in PBS (pH 7.4)
- **Concentration** Lot specific (see the label on the vial), determined by BCA protein assay.
- **SDS-PAGE Image**

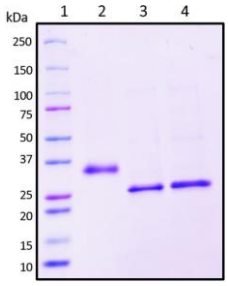
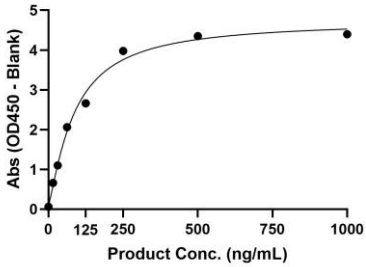


Figure 1. Deglycosylation analysis of purified recombinant proteins. The same amount of purified proteins were untreated (Lane 2) or treated with protein deglycosylation enzymes under native (Lane 3) or reducing (Lane 4) conditions. Deglycosylation treatment resulted in a mobility shift of the protein to produce one reduced band at the expected size, thus indicating that the untreated recombinant protein (Lane 2) was glycosylated. **Lane 1**, protein standard ladder (kDa); **Lane 2**, untreated protein; **Lane 3**, treated protein with deglycosylation enzymes under native conditions; **Lane 4**, treated protein with deglycosylation enzymes under denature conditions.

Binding Function

Figure 2. Product binding ability was measured by ELISA. The immobilized recombinant human ACE2 protein (Catalog #. 230-30165, coated at 0.5 ug/ml, 100 ul/well) was incubated with the serial diluted SARS CoV-2 S1 RBD T478K mutant protein (Catalog #. 230-30203). The bound mutant protein was detected by mouse anti-S1 RBD monoclonal antibody using ELISA. The calculated EC50 is 86.78 ng/ml.



Shipping

The product is shipped with ice packs

Storage/Stability

Upon arrival, the liquid protein may be stored for 2 weeks at 4°C. For long term storage, it is recommended to store at -20°C or -80°C in appropriate aliquots. Avoid repeated freeze-thaw cycles.