Recombinant SARS-CoV-2 S1 Subunit Protein
Host Cell Receptor Binding Domain (RBD)

**Source**
- **Species**: SARS-CoV-2
- **Accession Number**: QHD43416
- **Expressed Region**: Arg319 - Phe541
- **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%
- **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 deglycosylation, it migrates as approximately 30 kDa protein bands in SDS-PAGE under DTT, betamercaptoethanol reducing conditions. See deglycosylation analysis image below.

**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**: Deglycosylation analysis of purified recombinant proteins. The purified proteins were untreated (Lane 2) or treated with Protein Deglycosylation Kit under native (Lane 3) or reducing (Lane 4) conditions. Deglycosylation treatment resulted in a mobility shift of the protein to produce one major band at the expected size (~25 kDa), thus indicating that the untreated recombinant protein (Lane 2) was glycosylated. **Lane 1**: Protein standard ladder (kDa); **Lane 2**: Untreated protein under reducing conditions; **Lane 3**: Treated protein with deglycosylation enzymes under native conditions; **Lane 4**: Treated protein with deglycosylation enzymes under reducing conditions.

**Binding Function**
The product S1/RBD (Cat. 230-30162) was coated in 96 well plate and incubated with the serial diluted human ACE2 protein (Raybio, Cat. 230-30165). The bound ACE2 was detected by anti-ACE2 antibody using ELISA. The calculated EC50 is 4.23-9.26 ng/mL (right).

**Shipping**
The product is shipped with ice packs.

**Storage/Stability**
Upon arrival, the 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.

**References**

This product is furnished for LABORATORY RESEARCH USE ONLY. Not for diagnostic or therapeutic use.