

## SARS-COV-2 (2019-NCOV) S PROTEIN RBD, MFC-HIS TAG

**Cat.#:** 11272

**Product Name:** SARS-CoV-2 (2019-NCov) S Protein RBD

**Size:** 10 µg, 50 µg and 100 µg

**Synonyms:** S protein RBD; Spike glycoprotein Receptor-binding domain; S glycoprotein RBD; Spike protein RBD; COVID-19

**Target:** S protein RBD

**UNIPROT ID:** P0DTC2

**Description:** Recombinant SARS-CoV-2 (2019-nCoV) S protein RBD with C-terminal mouse Fc and 6xHis tag

**Background:** SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2) also known as Covid19 (2019 Novel Coronavirus) is a virus that causes illnesses ranging from the common cold to severe diseases. The spike protein is a type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which accounts for recognizing the cell surface receptor, ACE2. S2 contains basic elements needed for the membrane fusion. Recent publications indicate that S1-RBD domain can induce virus neutralizing-antibody and T cell response.

**Species/Host:** HEK293

**Molecular Weight:** The protein has a predicted molecular mass of 52.2 kDa after removal of the signal peptide.

**Molecular Characterization:** S protein RBD(Arg319-Phe541) mFc(Pro99-Lys330) 6xHis tag

**Purity:** The purity of the protein is greater than 90% as determined by SDS-PAGE and Coomassie blue staining.

**Formulation & Reconstitution:** Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% – 8% trehalose is added as protectants before lyophilization.

**Storage & Shipping:** Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.

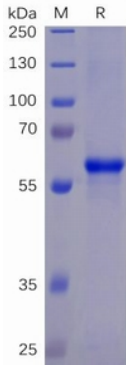
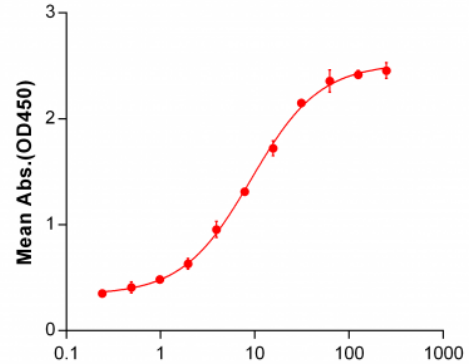


Figure 1. SARS-CoV-2 (2019-nCoV) S protein RBD, mFc-His Tag on SDS-PAGE under reducing condition.

### S-RBD, mFc-His Tagged protein ELISA

0.2 µg of S-RBD, mFc-His Tagged protein per well



Anti-SARS-CoV-2 S protein RBD Neutralizing Antibody (ng/ml)

Figure 2. ELISA plate pre-coated by 2 µg/ml (100 µl/well) SARS-CoV-2 (2019-nCoV) S protein RBD, mFc-His tagged protein (I1272) can bind Anti-SARS-CoV-2 S protein RBD Neutralizing Antibody (A neutralizing monoclonal antibody clone currently under clinical investigation from collaboration company) in a linear range of 0.24-9.141 ng/ml.

### Anti-SARS-CoV-2 S protein RBD mAb

0.2 µg of S-RBD, mFc-His Tagged protein per well

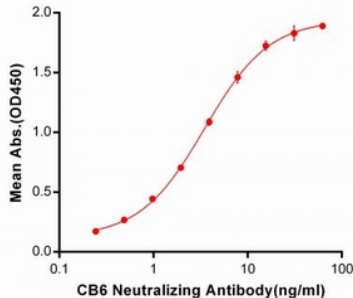
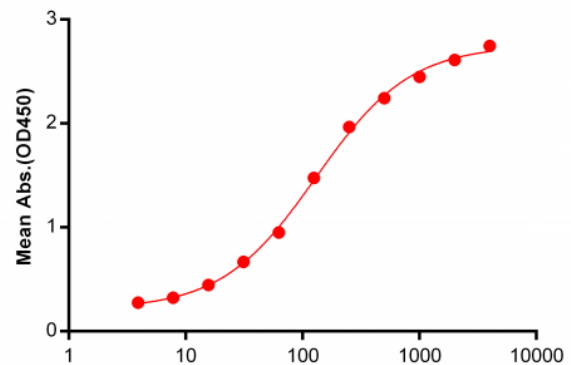


Figure 3. ELISA plate pre-coated by 2 µg/ml (100 µl/well) S-RBD, mFc-His tagged protein (I1272) can bind Anti-SARS-CoV-2 Neutralizing antibody CB6 28020 in a linear range of 0.24-15.62 ng/ml.

### S-RBD, mFc-His Tagged protein ELISA

0.2 µg of S-RBD, mFc-His Tagged protein per well



Human ACE2, hFc Tagged protein (ng/ml)

Figure 4. ELISA plate pre-coated by 2 µg/ml (100 µl/well) S-RBD, mFc-His tagged protein (I1272) can bind Human ACE2, hFc Tagged protein I1196 in a linear range of 0.488-49.83 ng/ml.