

Technical Data Sheet

Biotinylated SARS-CoV-2 Spike RBD (N501Y) Protein (C-His-Avi)

Catalog Number: 602803, 602804

Size: 25 ug, 100 ug

Target Name: SARS-CoV2 RBD, Spike RBD Protein, RBD Protein

Regulatory Status: RUO

Product Details

Application: ELISA, BLI

Format: Liquid, Biotinylated

Expression Host: HEK293

Species: SARS-CoV-2

Accession Number: QHD43416.1

Sources: Recombinant SARS-CoV-2 S protein RBD (Arg319-Phe541, N501Y) with C-terminus His-Avi tag was expressed in 293 Cells. This protein was site-specifically labeled with Biotin by BirA ligase.

Molecular Weight: This protein has a predicted molecular weight of 29 kDa. Under DTT-reducing conditions, the protein migrates at approximately 30-40 kDa on SDS-PAGE.

Affinity Tag: C-His-Avi

Purity: >95% based on SDS-PAGE under reducing condition

Formulation: 1xPBS buffer, pH7.4, 0.22 µm filtered

Endotoxin level: Not tested

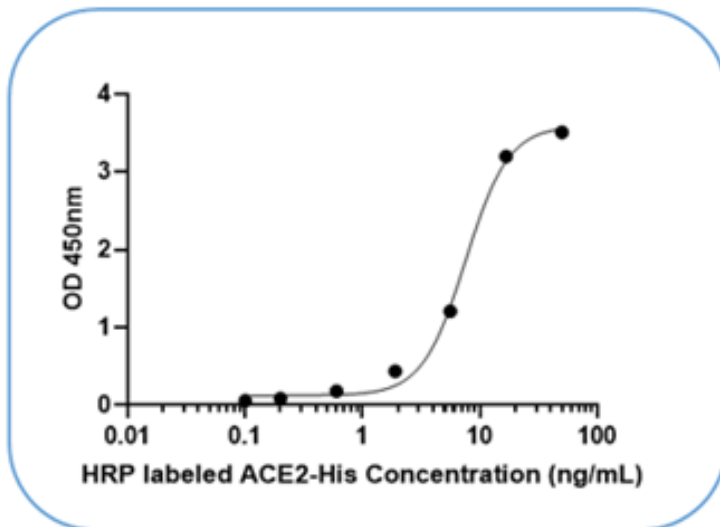
Protein Concentration: 25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.

Storage and Handling: Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ -70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

Background Information

The receptor-binding domain (RBD) of SARS-CoV-2 is a critical region of the spike (S) protein that directly interacts with the human ACE2 receptor to facilitate viral entry into host cells. It is located within the S1 subunit of the spike protein and adopts a compact, globular structure stabilized by disulfide bonds. Due to its essential role in viral entry, the RBD is a primary target for neutralizing antibodies, vaccines, and therapeutic interventions. Mutations in the RBD—seen in various SARS-CoV-2 variants—can increase binding affinity to ACE2 or help evade immune responses. The N501Y mutation enhances the virus's ability to bind to the ACE2 receptor, likely contributing to increased transmissibility.

Product Data



Biotinylated SARS-CoV2 spike RBD (N501Y, C-His-Avi) is coated at 2 $\mu\text{g/mL}$ (200 ng/well). HRP labeled human ACE2-His (catalog# 600005) can bind this RBD protein in the dose dependent manner. ED50 is around 5-20 ng/mL.