

Recombinant SARS-CoV 2 Spike RBD mFc-Chimera

Cat. No. Ab-P0018

Size 100 µg

Host Species Human

Expression Host HEK293

Protein construction A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) Spike Protein (RBD) (**YP_009724390.1**) (Ser325-Lys529) was fused with the Fc region of mouse IgG2a at C-terminus

Purity >95% as determined by SDS-PAGE

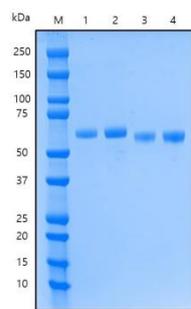
Bioactivity Measured by its binding ability in a functional ELISA. Immobilized RBD-mFc at 2µg/mL (100µL/well) can bind SARS-CoV Ab (CR3022).

Formulation 0.22µm filtered solution in PBS pH7.4

Storage Store it under sterile condition at -70°C upon receiving. Recommend to aliquot the protein in to smaller quantities for storage. Avoid repeated freeze –thaw cycles.

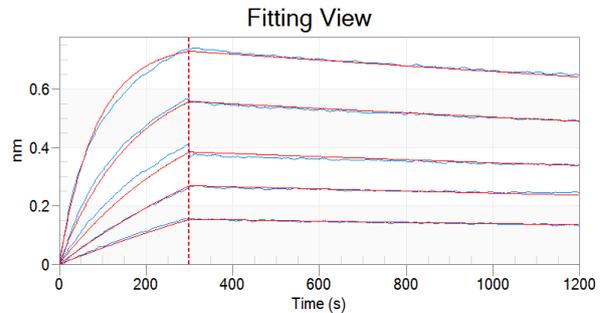
Molecular Mass The recombinant SARS-CoV-2 (2019-nCoV) Spike Protein (RBD, mFc fusion) consists of 443 amino acids and predicts a molecular mass of 49.8 kDa.

Image



<Gradient gel, CBB staining>

Lane M : Standard Marker
 Lane 1 : BSA (1µg)
 Lane 2 : BSA (2µg)
 Lane 3 : RBD-mFc (1µg)
 Lane 4 : RBD-mFc (2µg)



Immobilization : RBD-mFc, 5 ug/mL, Analyte : humanACE2-his

KD (M)	kon(1/Ms)	kdis(1/s)	Full R ²	Range (nM)
1.26E-09	1.14E+05	1.44E-04	0.9978	100 ~6.25

Background

The Spike protein (S) of and SL-CoVs, which is a type I transmembrane glycoprotein and mediates the entrance to human respiratory epithelial cells by interacting with cell surface receptor such as angiotensin-converting enzyme 2 (ACE2)

The Spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion.

In previous studies, a number of potent monoclonal antibodies against SARS coronavirus (SARS-CoV) have been identified. These antibodies target more specifically the 193 amino acid length (N318-V510) receptor binding domain (RBD) within the S protein is the critical target for neutralizing antibodies. Some of the antibodies recognize different epitopes on RBD, for example the SARS-CoV neutralizing antibodies CR3014 and CR3022 bound noncompetitively to the SARS-CoV RBD and neutralized the virus in a synergistic fashion.

Reference

- 1) Xialong Tian et al. (2020) Emerging Micorobes & Infections. Vol9 381
- 2) Meng Yuan et al. (2020) Science. 368:630