Recombinant SARS-CoV 2 Spike RBD_I468V mFc-Chimera

**Cat. No.** Ab-P0046

**Size** 100 µg

**Host Species** Human

**Expression Host** 293F

**Protein construction** A DNA sequence encoding SARS-CoV-2 (2019-nCoV) spike protein (RBD) (YP_009724390.1) (Ser325-Lys529) substituted I468V fused with the Fc region of mouse IgG2a in C-terminus.

**Purity** >95% as determined by SDS-PAGE

**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.

**Reference**
1) Xiaolong Tian et al. (2020) Emerging Microbes & Infections. Vol9 381
2) Meng Yuan et al. (2020) Science. 368:630

**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.