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32-190074: SARS-CoV-2 Spike Protein S1 (RBD):Fc (human) (rec.) (P.1 Variant, Gamma)

Reactivity :	Human
Uniprot ID :	QHD43416.1
Alternative Name :	2019-nCoV Spike Protein S1 (RBD); Spike Receptor Binding Domain Variant Brazil, B.1.1.248; 20J/501Y.V3; VOC-202101/02

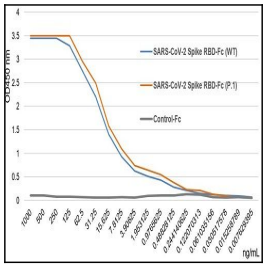
Description

Biological Activity: Binds to human ACE2. MW:~60kDa (SDS-PAGE); ~115 kDa (Dimer) (SEC) Endotoxin Content:<0.01EU/µg purified protein (LAL test).

SARS-CoV-2 shares 79.5% sequence identity with SARS-CoV and is 96.2% identical at the genome level to the bat coronavirus BatCoV RaTG133, suggesting it had originated in bats. The coronaviral genome encodes four major structural proteins: the Spike (S) protein, Nucleocapsid (N) protein, Membrane/Matrix (M) protein and the Envelope (E) protein. The SARS Envelope (E) protein contains a short palindromic transmembrane helical hairpin that seems to deform lipid bilayers, which may explain its role in viral budding and virion envelope morphogenesis. The SARS Membrane/Matrix (M) protein is one of the major structural viral proteins. It is an integral membrane protein involved in the budding of the viral particles and interacts with SARS Spike (S) protein and the Nucleocapsid (N) protein. The N protein contains two domains, both of them bind the virus RNA genome via different mechanisms. The CoV Spike (S) protein assembles as trimer and plays the most important role in viral attachment, fusion and entry. It is composed of a short intracellular tail, a transmembrane anchor and a large ectodomain that consists of a receptor binding S1 subunit (RBD domain) and a membrane-fusing S2 subunit. The S1 subunit contains a receptor binding domain (RBD), which binds to the cell surface receptor angiotensin-converting enzyme 2 (ACE2) present at the surface of epithelial cells. Recently, a new variant of SARS-CoV-2, called P.1 (Gamma) was detected in Brazil. This variant carries three mutations in the RBD at the positions 417, 484 and 501 (K417T, E484K, N501Y). The P.1 or Brazilian variant is a form of the SARS-CoV-2 coronavirus that appears to have evolved in Brazil and might have contributed to a surge in cases in the northern city of Manaus.

Product Info

Amount :	50 µg
Purification :	â‰¥95% (SDS-PAGE)
Content :	Concentration 1mg/ml after reconstitution. Reconstitution Reconstitute with 50µl endotoxin-free water. Formulation Lyophilized. Contains PBS.
Storage condition :	Short Term Storage +4°C Long Term Storage -20°C
Amino Acid :	Receptor-binding domain (RBD) of SARS-CoV-2 Spike protein S1 (aa 319-541) containing the mutations K417T, E484K, N501Y is fused to the N-terminus of the Fc region of human IgG1.



SARS-CoV-2 Spike Protein S1 (RBD):Fc (human) (rec.) (P.1 Variant, Gamma) binds to the receptor ACE2 (human) (rec.) slightly stronger than SARS-CoV-2 Spike Protein S1 (RBD):Fc (human) (rec.) (WT).

For Research Use Only. Not for use in diagnostic/therapeutics procedures.