

COVID 19 Spike RBD Coronavirus Active Protein | COVID-19 active protein

Recombinant SARS-CoV-2 (2019-nCoV) Spike RBD protein

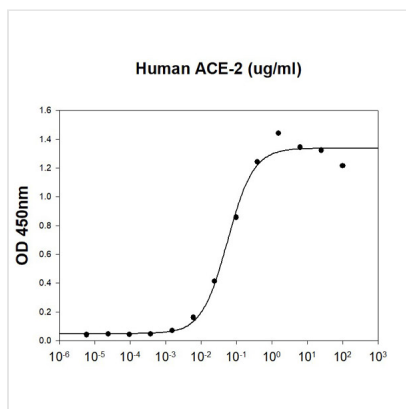
CATALOG # AAA48377	HOST HEK293	APPLICATIONS SDS-Page
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PRODUCT SYNONYMS

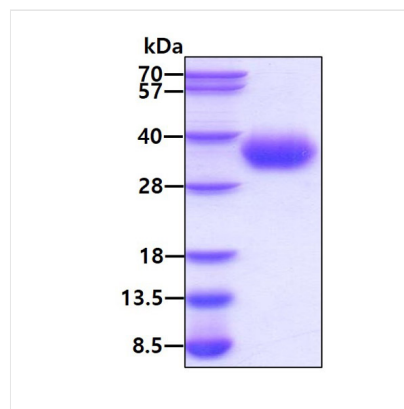
COVID 19 Spike RBD Coronavirus; Recombinant SARS-CoV-2 (2019-nCoV) Spike RBD protein; 2019 Novel Coronavirus; Coronavirus; CoV; COVID-19 virus; HCoV-2; Human Coronavirus 2019; SARS2; SARS-CoV-2; Severe acute respiratory syndrome coronavirus 2; Spike RBD; COVID-19; COVID19; HCoV-19; Human coronavirus 2019; SARS-2; SARS-CoV2; Wuhan coronavirus; SARS-CoV-2 SP RBD; 2019-nCoV SP RBD; 2019-nCoV; Spike RBD Protein; COVID-19 active protein

PRODUCT SPECIFICATIONS

Host	HEK293
Purity/Purification	>95% by SDS-PAGE
Form/Format	Liquid. In Phosphate-Buffered Saline (pH7.4) containing 10% glycerol
Concentration	0.25mg/ml (determined by Absorbance at 280nm) (varies by lot)
Sequence Positions	319-529aa
Sequence	RVQP TESIVRFPNI TNLCPFGEVF NATRFASVYA WNRKRISNCV ADYSVLYNSA SFSTFKCYGV SPTKLNLDLCF TNVYADSFVI RGDEVQRQIAP GQTGKIADYN YKLPDDFTGC VIAWNSNNLD SKVGGNYNYL YRLFRRKSNLK PFERDISTEI YQAGSTPCNG VEGFNCYFPL QSYGFQPTNG VGYQPYRVVV LSFELLHAPA TVCGPKK
Applicable Applications for COVID-19 active protein	Bioactivity, SDS-PAGE
Endotoxin	<1 EU per 1ug of protein (determined by LAL method)
Species	SARS-CoV-2 (2019-nCoV) Spike RBD
Tag	His-Tag
Predicted N-term	Asp
Bioactivity	Measured by its binding ability in a functional ELISA with Human ACE-2
Preparation and Storage	Can be stored at +2C to +8 degree C for 1 week. For long term storage, aliquot and store at -20C to -80 degree C. Avoid repeated freezing and thawing cycles.

**Bioactivity**

SARS-CoV-2 Spike RBD is coated at 5ug/ml (100 ul/well) can bind ACE-2 (CAT# ATGP3963) in a Functional ELISA assay.

**SDS-PAGE**

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

ADDITIONAL INFORMATION

Related Product Information for COVID-19 active protein

An epidemic of acute respiratory syndrome in humans, which appeared in Wuhan, China in December 2019, was caused by a novel coronavirus (SARS-CoV-2). This disease was named as "Coronavirus Disease 2019" (COVID-19). This virus shares highly homologous sequence with SARS-CoV, and causes acute, highly lethal pneumonia coronavirus disease 2019 (COVID-19) with clinical symptoms similar to those reported for SARS-CoV and MERS-CoV. The genome of this and other emerging pathogenic human CoVs encodes four major structural proteins [spike (S), envelope (E), membrane (M), and nucleocapsid (N)], approximately 16 nonstructural proteins (nsp1-16), and five to eight accessory proteins. Among them, the S protein plays an essential role in viral attachment, fusion, entry, and transmission. It comprises an N-terminal S1 subunit responsible for virus-receptor binding and a C-terminal S2 subunit responsible for virus-cell membrane fusion. S1 is further divided into an N-terminal domain (NTD) and a receptor-binding domain (RBD). SARS-CoV-2 and SARS-CoV bind angiotensin-converting enzyme 2 (ACE2) while MERS-CoV binds dipeptidyl peptidase 4 (DPP4), as receptors on the host cell expressing ACE2 (e.g., pneumocytes, enterocytes) or DPP4 (e.g., liver or lung cells including Huh-7, MRC-5, and Calu-3). During infection, CoV first binds the host cell through interaction between its S1-RBD and the cell membrane receptor, triggering conformational changes in the S2 subunit that result in virus fusion and entry into the target cell. Recombinant SARS-CoV-2 (2019-nCoV) Spike RBD, fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

Product Categories/Family for COVID-19 active protein

[Virus](#); [Proteins](#)

References

Yushun Wan. et al. (2020) J Virol. 17:94:e00127-20. Wu, F. et al. (2020) Nature. 579:265-269. Ortega, J.T. et al. (2020) EXCLI J. 19:410-417. Wanbo T., et al. (2020) Cell. Mol. Immunol. 17:613-620. Gorbalenya A., et al. (2020) Nat. Microbiol. 5:536-544. Tortorici, M.A. and D. Veisler. (2019). Adv. Virus Res. 105:93-116.

NCBI AND UNIPROT INFORMATION

UniProt Accession #	P0DTC2
Molecular Weight	Mol_Mass: 47.9 kDa; AP_Mol_Mass: 50-60 kDa

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/hek293-covid-19-active-protein/covid-19-spike-rbd-coronavirus/48377>