

COVID 19 Spike S1 (K417N, E484K, N501Y, D614G) Coronavirus Recombinant Protein | COVID-19 recombinant protein

2019-nCoV Spike protein S1 (K417N, E484K, N501Y, D614G)

CATALOG # AAA73332	HOST CHO cells
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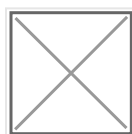
PRODUCT SYNONYMS

COVID 19 Spike S1 (K417N; E484K; N501Y; D614G) Coronavirus; 2019-nCoV Spike protein S1 (K417N; D614G); 2019 Novel Coronavirus; Coronavirus; CoV; COVID-19 virus; HCoV-2; Human Coronavirus 2019; SARS2; SARS-CoV-2; Severe acute respiratory syndrome coronavirus 2; Spike S1 (K417N; 2019-nCoV s1; SARS-CoV-2 spike S1; SARS-CoV-2 S1; novel coronavirus spike s1; nCov spike s1; coronavirus spike S1.; COVID-19 recombinant protein

PRODUCT SPECIFICATIONS

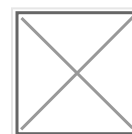
Host	CHO cells
Form/Format	Recombinant protein stored in 50mM sodium phosphate, pH7.5, 300mM NaCl, 150mM imidazole.
Concentration	1.0ug/ul (determined by densitometry) (varies by lot)
Tag	HIS
Species	SARS-CoV-2
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Store product at -70 degree C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

IMAGES



SDS-PAGE

Purity: Sample Purity Data. For specific information on a given lot, see related technical data sheet



Activity

Activity: Sample Activity Plot. For specific information on a given lot, see related technical data sheet.

ADDITIONAL INFORMATION

Related Product Information for COVID-19 recombinant protein	Recombinant 2019-nCoV Spike protein S1 (K417N, E484K, N501Y, D614G)(16-685) was expressed in CHO cells using a C-terminal His-tag. The gene accession number is MN908947. Novel coronavirus SARS-CoV-2 has caused the pandemic of the respiratory diseases (COVID-19) around the world since 2020 (1). The spike glycoprotein (S) of coronavirus binds to the host cells through the interaction with angiotensin-converting enzyme 2 (ACE2) and facilitate viral entry into the host cell (2). SARS-CoV-2 (501Y.V2 variant) with mutations K417N, E484K and N501Y in the spike protein severely affected regions of South Africa (2). A combination of E484K, K417N and N501Y results in the highest degree of conformational modifications of receptor binding domain of spike protein when bound to hACE2, compared to either E484K or N501Y alone. E484K and N501Y increase affinity of RBD for hACE2 and the charge switch due to E484K leads to the formation of favorable contacts (3).
Product Categories/Family for COVID-19 recombinant protein	COVID-19 Proteins; COVID19

References

1. Zhou P, et al: A pneumonia outbreak associated with a new coronavirus of probable bat origin. Nature. 2020, 579:270-89.
2. Houriiyah T, et al: Emergence and rapid spread of a new severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2) lineage with multiple spike mutations in South Africa. medRxiv 2020; doi: <https://doi.org/10.1101/2020.12.21.20248640>
3. Starr TN, et al: Molecular dynamic simulation reveals E484K mutation enhances spike RBD-ACE2 affinity and the combination of E484K, K417N and N501Y mutations (501Y.V2 variant) induces conformational change greater than N501Y mutant alone, potentially resulting in an escape mutant. Cell. 2020, 182(5):1295-1310
4. Harvey WT, et al: SARS-CoV-2 variants, spike mutations and immune escape. Nat Rev. Microbiol. 2021, 19:409-424.

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/covid-19-spike-s1-k417n-e484k-n501y-d614g-coronavirus-recombinant-protein-cho-cells/73332>