

Active Recombinant SARS-CoV-2 Spike protein RBD (K417N, E484K, N501Y) Protein, HRP conjugated, His-tagged

Cat. No. S-1006S **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant 2019-nCoV Spike protein S1 subunit, RBD (K417N, E484K, N501Y) (319-541) was expressed in CHO cells using a C-terminal his tag, and then conjugated to Horse peroxidase (HRP).
Species	SARS-CoV-2
Source	CHO
ProteinLength	319-541 a.a.
Description	The receptor binding domain (RBD) of the SARS-CoV-2 spike glycoprotein recognizes the host ACE2 receptor and is a major determinant of viral entry and neutralization. SARS-CoV-2 (501Y.V2 variant) with mutations at the key sites in RBD (K417N, E484K and N501Y) has severely affected regions of South Africa. MD simulation indicates that the combination of E484K, K417N and N501Y results in the highest degree of conformational modifications of RBD 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. As new variants displace the first-wave virus, it is pivotal to evaluate their transmissibility, virulence and their possible tendency to escape antibody neutralization.
Bio-activity	Binding ability measured in a functional ELISA. 2019-nCoV RBD (K417N, E484K,

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	N501Y) binds to immobilized human ACE2(19-740) protein.
Purity	> 90%
Stability	One year at -20 centigrade from date of shipment.
Storage	Store product at –20 centigrade. 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.
Concentration	0.2 µg/µL
Storage Buffer	1×PBS, pH 7.4 and 50% glycerol.
Conjugation	HRP

GENE INFORMATION

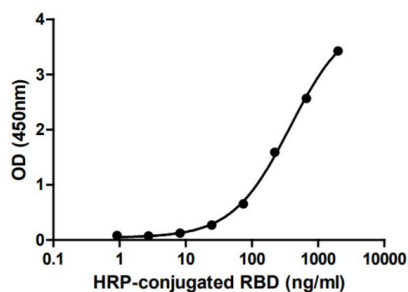
Gene Name	S surface glycoprotein [Severe acute respiratory syndrome coronavirus 2]
Official Symbol	S
Synonyms	S; surface glycoprotein; spike glycoprotein; surface glycoprotein; structural protein; spike protein
Gene ID	43740568
mRNA Refseq	MN908947
Protein Refseq	YP_009724390

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Activity



Binding ability measured in a functional ELISA. 2019-nCoV RBD (K417N, E484K, N501Y) binds to immobilized human ACE2(19-740) protein.

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