Recombinant SARS-CoV-2 (E484Q, L452R Mutant) Spike Glycoprotein (S1) RBD, His-tagged

Cat. No. S-301S **Lot. No.** (See product label)

SPECIFICATION

Product Overview	SARS-CoV-2 (B.1.617.1) spike RBD contains E484Q, L452R mutations relative to Wuhan Hu-1 with a C-terminus His tag was expressed in HEK293 and purified by affinity chromatography.
Species	SARS-COV-2
Source	HEK293
ProteinLength	1-223
Description	Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the virus that causes coronavirus disease 2019 (COVID-19). The sequence WIV04/2019, belonging to the GISAID S clade / PANGOLIN A lineage / Nextstrain 19B clade, is believed to be the original sequence infecting humans. However, there are many thousands of variants of SARS-CoV-2 and subtypes of the virus can be placed into much larger groupings such as lineages or clades. B.1.617, also known as the "double mutant" variant, was first detected in India in October 2020. Since then, three sub lineages of this variant have been detected, namely B.1.617.1, B.1.617.2 and B.1.617.3. The B.1.617.2 is extremely transmissible and is the fourth strain of the SARS-CoV-2 virus to have undergone a mutation toward a more virulent and transmissible form. The B.1.617 lineage possesses 13 to 17 mutations, three of which are in the virus' spike protein. The E484Q mutation appears to confer the virus increased binding capacity to the human ACE2 receptor

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	and better ability to evade the immune system compared to other variants. The L452R mutation provides a similar enhancement of functions as the E484Q. The third mutation, P681R, may increase the infectivity of the virus particles by facilitating the splicing of a unique precursor protein into its active infective conformation. B.1.617.1 shows potential reduction in neutralization by some monoclonal antibody treatments and reduction in neutralization by post-vaccination sera.
Form	Liquid
Molecular Mass	Expected Molecular Weight: 27 kDa Observed Molecular Weight: 35 kDa
Purity	Greater than 90% purity.
Storage	Short Term Storage: -80 centigrade Long Term Storage: -80 centigrade Can be frozen, but avoid multiple freeze-thaw cycles.
Storage Buffer	DPBS
Shipping	Dry Ice

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

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Gene ID	43740568
mRNA Refseq	MN908947
Protein Refseq	YP_009724390
SDS-PAGE	Coomassie-stained SDS-PAGE showing purified SARS-CoV-2 RBD with E484Q and L452R mutations.

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