

Recombinant SARS-CoV-2 Spike RBD (K417T, E484K, N501Y) [hFc] (DAGC686)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	A DNA sequence encoding the SARS-CoV-2 Spike RBD (YP_009724390.1, with mutations K417T, E484K, N501Y) (Arg319-Phe541) was expressed with the Fc region of human IgG1 at the C-terminus. The mutations were identified in the SARS-CoV-2 variant (known as variant P.1) which emerged in the Brazil.
Nature	Recombinant
Expression System	HEK293 Cells
Species	SARS-CoV-2
Purity	> 95 % as determined by SDS-PAGE
Conjugate	hFc
Applications	ELISA
Molecular Weight	The recombinant SARS-CoV-2 Spike RBD consists of 462 amino acids and predicts a molecular mass of 51.9 kDa. As a result of glycosylation, it migrates as an approximately 55.9 kDa band in SDS-PAGE under reducing conditions.
Endotoxin	< 1.0 EU per μg protein as determined by the LAL method.
Procedure	None
Format	Lyophilized
Size	100 μg
Buffer	Lyophilized from sterile PBS, pH 7.4.

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Preservative	None
Storage	Store it under sterile conditions at -20°C to -80°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

BACKGROUND

Introduction	The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell: they are essential for both host specificity and viral infectivity. The term 'peplomer' is typically used to refer to a grouping of heterologous proteins on the virus surface that function together. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. Most notable is severe acute respiratory syndrome (SARS). The severe acute respiratory syndrome-coronavirus (SARS-CoV) spike (S) glycoprotein alone can mediate the membrane fusion required for virus entry and cell fusion. It is also a major immunogen and a target for entry inhibitors. The SARS-CoV spike (S) protein is composed of two subunits; the S1 subunit contains a receptor-binding domain that engages with the host cell receptor angiotensin-converting enzyme 2 and the S2 subunit mediates fusion between the viral and host cell membranes. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity, during infection with SARS-CoV.
Keywords	SARS-CoV-2 Spike RBD; SARS-CoV-2; SARS-CoV-2 S1 RBD; SARS-CoV-2 Spike; SARS-CoV-2 RBD

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