



# SARS-CoV-2 (COVID-19) Omicron Variant (B.1.1.529) Spike RBD Recombinant Protein

Cat. No.: 21-801



## Ψ Specifications

<b>SPECIES:</b>	SARS-CoV-2
<b>SOURCE SPECIES:</b>	Mammalian cells
<b>SEQUENCE:</b>	RBD with mutations at G339D, S371L, S373P, S375F, K417N, N440K, G446S, S477N, T478K, E484A, Q493K, G496S, Q498R, N501Y, Y505H.
<b>FUSION TAG:</b>	His Tag
<b>APPLICATIONS:</b>	Immunogen

## Ψ Properties

<b>PURITY:</b>	>90% as determined by SDS-PAGE
<b>PHYSICAL STATE:</b>	Lyophilized
<b>BUFFER:</b>	Supplied as lyophilized from PBS, pH 7.5. Please reconstitute the protein with ddH2O to the concentration with 1mg/ml.
<b>STORAGE CONDITIONS:</b>	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 °C for one week .Store at -20 to -80 °C for twelve months from the date of receipt.

<b>ALTERNATE NAMES:</b>	Spike,S protein RBD,Spike glycoprotein Receptor-binding domain,S glycoprotein RBD,Spike protein RBD
<b>ACCESSION NO.:</b>	P0DTC2(G339D, S371L, S373P, S375F, K417N, N440K, G446S, S477N, T478K, E484A, Q493K, G496S, Q498R, N501Y, Y505H)

 Background and References

<b>BACKGROUND:</b>	<p>Protein S (PROS1) is glycoprotein and expressed in many cell types supporting its reported involvement in multiple biological processes that include coagulation, apoptosis, cancer development and progression, and the innate immune response. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2, DPP4, CEACAM etc.. 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. It's been reported that 2019-nCoV can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion. The S protein plays key parts in the induction of neutralizing antibody and T-cell responses, as well as protective immunity.</p>
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