SARS-CoV-2 JN.1 Spike S1+S2 trimer Protein (Omicron variant)

Cat No:HR4S0050

For research use only

Overview

Quantity	
Gene Symbol	
Gene ID	
Accession	
Alternative Name	
Species	
Source	SARS-CoV-2
Description	The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2; DPP4, dipeptidyl peptidase-4; APN, aminopeptidase N; CEACAM, carcinoembryonic antigen-related cell adhesion molecule 1; Sia, sialic acid; O-ac Sia, O-acetylated sialic acid. The spike is 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. It's been reported that SARS-CoV-2 (COVID-19 coronavirus, 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. The main functions for the Spike protein are summarized as: Mediate receptor binding and membrane fusion; Defines the range of the hosts and specificity of the virus; Main component to bind with the neutralizing antibody; Key target for vaccine design; Can be transmitted between different hosts through gene recombination or mutation of the receptor binding domain (RBD), leading to a higher mortality rate.
Functions	
Formulation	Lyophilized from sterile 25mM Sodium Citrate, 200mM NaCl, 0.02% tween80, pH 6.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Solubility	
Appearance	Lyophilized powder
Molecular Weight	
Purity	? 95 % (SDS-PAGE); ? 90 % (SEC-HPLC); ? 90 % (SEC-MALS)
Concentration	

Shipping Condition	
Storage Condition	Store at -20?C/-80?C upon receipt, aliquoting is necessary for mutiple use. Avoid repeated freeze-thaw cycles.