cellsciences.com

S Recombinant SARS-CoV-2 (2019-nCoV) Spike S1 RBD Protein (His Tag)

Catalog No.CSI99007Quantity:100 μgAlternate Names:Spike glycoprotein, Spike S1 subunit receptor binding domain

Description: The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to

certain receptors on the host cell. Known receptors that 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 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 mediates fusion of the virion and cellular membranes by acting as a class I viral fusion protein. The S protein plays key parts in the induction of neutralizing-antibody

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

and T-cell responses, as well as protective immunity. The main functions for the Spike

(RBD), leading to a higher mortality rate.

UniProt ID: P0DTC2

Accession Number: YP_009724390.1

Protein Construction: A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) Spike S1 RBD Protein

(Arg319-Phe541) was expressed with a polyhistidine tag at the C-terminus.

Source: HEK293

Formulation: Lyophilized from sterile PBS, PH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants

before lyophilization.

Molecular Weight: The recombinant SARS-CoV-2 (2019-nCoV) Spike S1 RBD protein (His Tag) consists of

234 amino acids with a predicted molecular mass of 26.54 kDa.

Purity: > 95 % as determined by SDS-PAGE

Endotoxin Level: < 1.0 EU per μg protein as determined by the LAL method.

Biological Activity: In a functional ELISA, immobilized human ACE2 protein (Fc tag) at 2 μg/ml (100 μl/well)

Toll Free: 888-769-1246

Phone: 978-572-1070

Fax: 978-992-0298

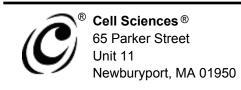
can bind SARS-CoV-2/2019-nCoV Spike S1 RBD Protein (His Tag). The EC50 of

E-mail: info@cellsciences.com

Website: www.cellsciences.com

SARS-CoV-2/2019-nCoV Spike S1 RBD Protein (His Tag) is 20-60 ng/ml.

Predicted N-terminal: Arg319



cellsciences.com

Reconstitution: Centrifuge vial prior to opening. Add sterile distilled water to a concentration of 0.1

mg/mL and gently pipette the solution up and down the sides of the vial. **DO NOT VORTEX**. Allow several minutes for complete reconstitution.

Storage & Stability: Stable for up to 1 year from date of receipt at -20°C to -80°C

After reconstitution, store working aliquots at -20°C to -80°C.

Avoid repeated freeze-thaw cycles.

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

Toll Free: 888-769-1246 E-mail: info@cellsciences.com
Phone: 978-572-1070 Website: www.cellsciences.com
Fax: 978-992-0298