S
Recombinant SARS-CoV-2 (2019-nCoV) S Protein RBD (K417N, E484K, N501Y) His Tag (South Africa variant)

Catalog No.	CSI99107	**Quantity:**	100 µg

Alternate Names: South African (ZA) variant (501Y.V2, B.1.351), 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. 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 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.

UniProt ID: P0DTC2

Accession Number: YP_009724390.1(K417N, E484K, N501Y)

Protein Construction: A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) Spike S1 RBD was expressed with a C-terminal His tag.

Source: Mammalian cells

Formulation: Lyophilized from sterile PBS, pH 7.5

Molecular Weight: 35 kDa

Purity: > 90 % as determined by SDS-PAGE.

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

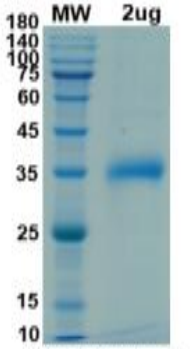
Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water to a concentration of 0.1 mg/mL and gently pipette the solution up and down the sides of the vial.
DO NOT VORTEX. Allow several minutes for complete reconstitution.

Storage & Stability: Stable for up to 1 year from date of receipt at -20°C to -80°C. After reconstitution, stable for 1 week at 2-8°C, or store working aliquots at -20°C to -80°C.
Avoid repeated freeze-thaw cycles.

Cell Sciences®
65 Parker Street
Unit 11
Newburyport, MA 01950

Toll Free: 888-769-1246
Phone: 978-572-1070
Fax: 978-992-0298

E-mail: info@cellsciences.com
Website: www.cellsciences.com



SDS-PAGE Image

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

Cell Sciences ®
65 Parker Street
Unit 11
Newburyport, MA 01950

Toll Free: 888-769-1246
Phone: 978-572-1070
Fax: 978-992-0298

E-mail: info@cellsciences.com
Website: www.cellsciences.com