

SARS-COV-2 Spike S (Omicron B.1.1.529) Trimer Protein

Cat. No. COV-VM1FO

Description

Recombinant SARS-COV-2 Spike S (Omicron B.1.1.529) Trimer Protein is expressed from HEK293 with His tag at the C-Terminus.

Source

It contains Val16-Pro1213(A67V, HV69-70del, T95I, G142D, VYY143-145del, N211del, L212I, ins214EPE, G339D, S371L, S373P, S375F, K417N, N440K, G446S, S477N, T478K, E484A, Q493R, G496S, Q498R, N501Y, Y505H, T547K, D614G, H655Y, N679K, P681H, N764K, D796Y, N856K, Q954H, N969K, L981F) trimer design. Proline substitutions (F817P, A892P, A899P, A942P, K986P, V987P) and alanine substitutions (R683A and R685A) are introduced to stabilize the trimeric prefusion state of SARS-CoV-2 S protein and abolish the furin cleavage site, respectively.

Accession

QHO60594.1

Molecular Weight

The protein has a predicted MW of 136.70 kDa. Due to glycosylation, the protein migrates to 140-180 kDa based on Bis-Tris PAGE result.

Endotoxin

Less than 1 EU per µg by the LAL method.

Purity

> 95% as determined by Bis-Tris PAGE

Formulation and Storage

Formulation

Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Reconstitution

Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.

Storage

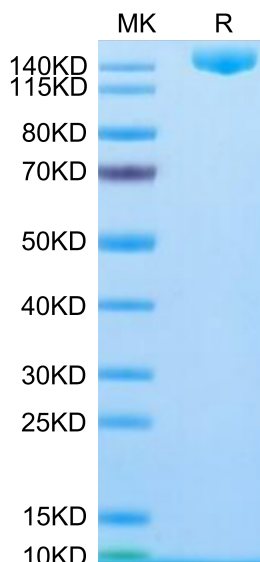
-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

Background

The spike protein (S) of coronavirus (CoV) attaches the virus to its cellular receptor, angiotensin-converting enzyme 2 (ACE2). A defined receptor-binding domain (RBD) on S mediates this interaction. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity.

Assay Data

Bis-Tris PAGE



SARS-COV-2 Spike S (Omicron B.1.1.529)
Trimer on Bis-Tris PAGE under reduced
condition. The purity is greater than 95%.

ELISA Data

SARS-COV-2 Spike S (Omicron B.1.1.529) Trimer Protein

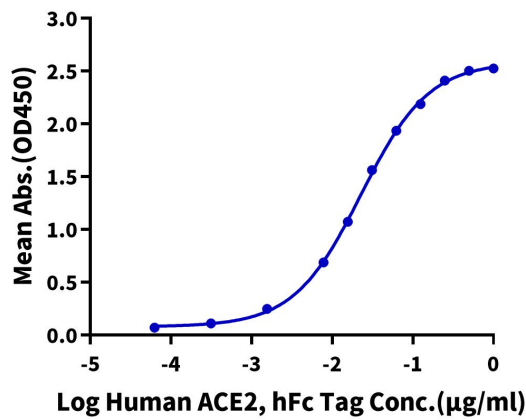
Cat. No. COV-VM1FO



Assay Data

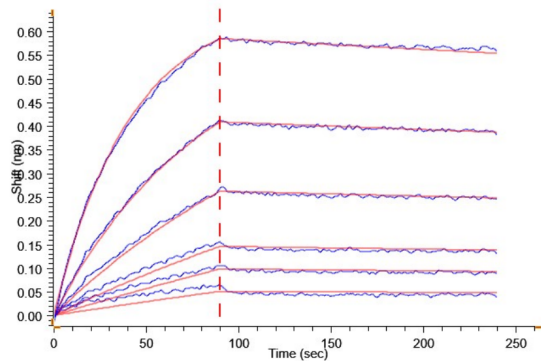
SARS-COV-2 Spike S (Omicron B.1.1.529) Trimer ELISA

0.2µg SARS-COV-2 Spike S (Omicron B.1.1.529) Trimer, His Tag Per Well



Immobilized SARS-COV-2 Spike S (Omicron B.1.1.529) Trimer, His Tag at 2µg/ml (100µl/well) on the plate. Dose response curve for Human ACE2, hFc Tag with the EC50 of 22.9ng/ml determined by ELISA.

BLI Data



Loaded Human ACE2, hFc Tag on ProA-Biosensor can bind SARS-COV-2 Spike S (Omicron B.1.1.529) Trimer, His Tag with an affinity constant of 3.08 nM as determined in BLI assay (Gator® Prime).