

SARS-COV-2 (Omicron B.1.1.529) Spike S1 Protein (His & Avi), Biotinylated

General Information

Synonyms:	Spike,S1 protein;S glycoprotein Subunit1;S1 protein;Spike protein S1
Protein Construction:	Gln14-Arg683(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).
Species:	SARS-CoV-2
Expression Host:	HEK293 Cells
Accession:	A0A6G7K2L4
Molecular Weight:	77.94 kDa (predicted). Due to glycosylation, the protein migrates to 110-120 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Biotinylated SARS-COV-2 Spike S1 (Omicron B.1.1.529) , His Tag at 1µg/ml (100µl/Well) on streptavidin (5µg/ml) precoated plate. Dose response curve for Human ACE2, hFc Tag with the EC50 of 0.35µg/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1 EU/µg by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS (pH 7.4). Typically, 8% saccharose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein 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.

Reference

Belouzard S, et al. Activation Of The Sars Coronavirus Spike Protein Via Sequential Proteolytic Cleavage At Two Distinct Sites[J]. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106(14):

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Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481