

SARS-COV-2 Spike S Trimer Protein (His & Avi)

General Information

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| Synonyms: | COVID-19;S protein;S glycoprotein;Spike glycoprotein |
| Protein Construction: | Val16-Glu1188 |
| Species: | SARS-CoV-2 |
| Expression Host: | HEK293 Cells |
| Accession: | A0A6G7K2L4 |
| Molecular Weight: | 136.6 kDa (predicted). Due to glycosylation, the protein migrates to 175-230 kDa based on Tris-Bis PAGE result. |

QC Testing

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| Biological Activity: | Immobilized SARS-COV-2 Spike S Trimer, His Tag at 1µg/ml (100µl/Well). Dose response curve for Human ACE2, hFc Tag with the EC50 of 18.0ng/ml determined by ELISA. |
| Purity: | > 95% as determined by Tris-Bis PAGE |
| Endotoxin: | < 1.0 EU/µg of the protein as determined by the LAL method. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS (pH 7.4). Typically, 8% trehalose 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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry 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

Parsons, et al. Glycosylation of the viral attachment protein of avian coronavirus is essential for host cell and receptor binding[J]. Journal of Biological Chemistry.

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