

## SARS-COV-2 Spike S1 NTD Protein (His & Flag)

### General Information

Synonyms:	S1 protein NTD,Spike glycoprotein Subunit1 NTD,S glycoprotein Subunit1 NTD,Spike protein S1 NTD
Protein Construction:	Val16-Ser305
Species:	SARS-CoV-2
Expression Host:	HEK293 Cells
Accession:	P0DTC2
Molecular Weight:	35 kDa (predicted). Due to glycosylation, the protein migrates to 55-70 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
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

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): 5871-5876.

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