

MERS S1 protein, His Tag

Catalog # S1N-M52H5



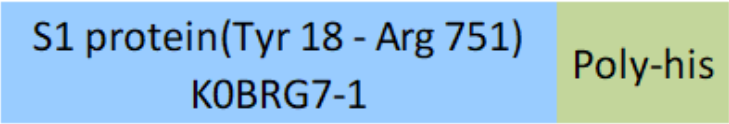
Synonym

Spike,S1 protein,Spike glycoprotein Subunit1,S glycoprotein Subunit1,Spike protein S1

Source

MERS S1 protein, His Tag(S1N-M52H5) is expressed from human 293 cells (HEK293). It contains AA Tyr 18 - Arg 751 (Accession # [K0BRG7-1](#)).
Predicted N-terminus: Tyr 18

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.
The protein has a calculated MW of 83.1 kDa. The protein migrates as 90-116 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method / rFC method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.
Contact us for customized product form or formulation.

Reconstitution

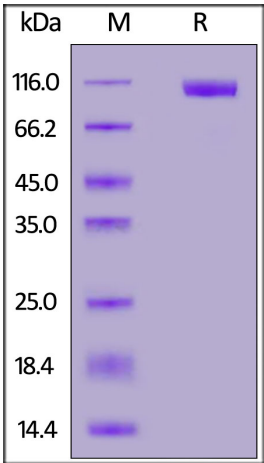
Please see Certificate of Analysis for specific instructions.
For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.
Please avoid repeated freeze-thaw cycles.

- This product is stable after storage at:
- -20°C to -70°C for 12 months in lyophilized state;
 - -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



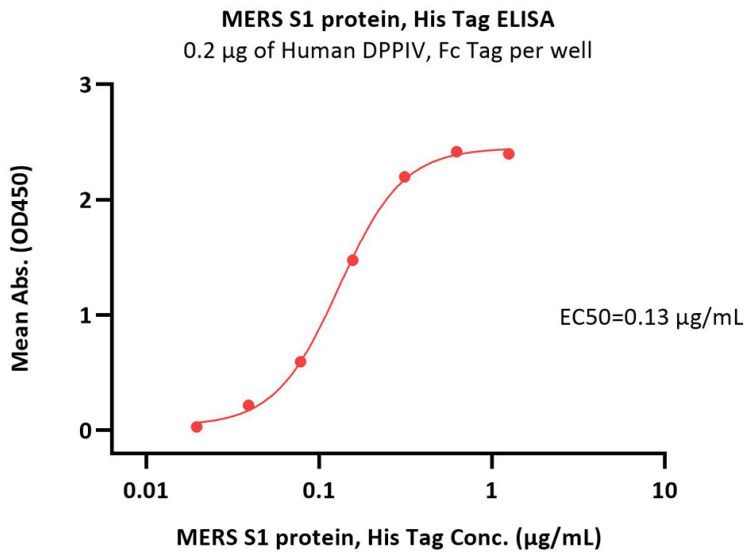
MERS S1 protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



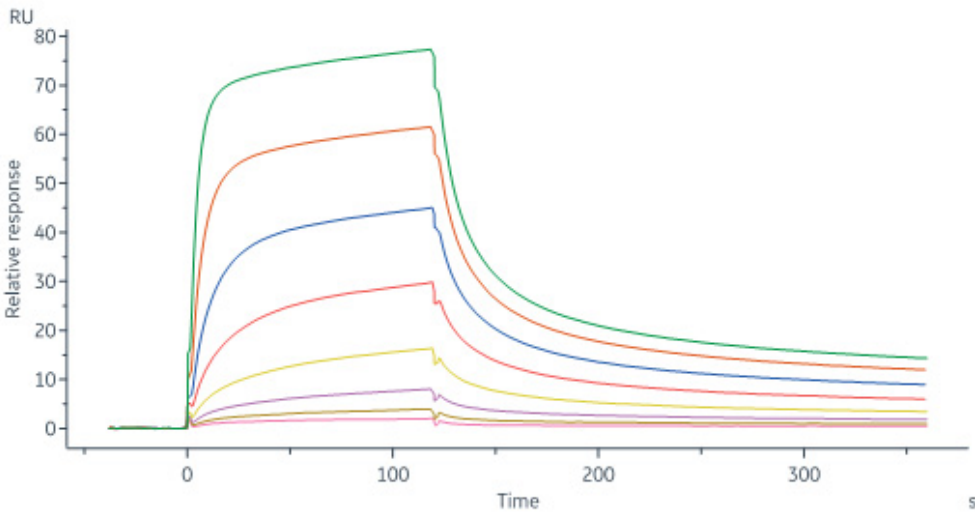
MERS S1 protein, His Tag

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Immobilized Human DPPIV, Fc Tag (Cat. No. DP4-H5266) at 2 µg/mL (100 µL/well) can bind MERS S1 protein, His Tag (Cat. No. S1N-M52H5) with a linear range of 0.039-0.156 µg/mL (QC tested).

Bioactivity-SPR



Human DPPIV, His Tag (Cat. No. DP4-H5221) immobilized on CM5 Chip can bind MERS S1 protein, His Tag (Cat. No. S1N-M52H5) with an affinity constant of 0.303 µM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

The MERS or Middle East Respiratory Syndrome Coronavirus, is a member of the coronavirus family and is known to cause severe respiratory illness in humans. The MERS protein is a type I transmembrane protein that plays a vital role in the virus's ability to infect host cells. It is composed of three main domains: the extracellular domain, the transmembrane domain, and the cytoplasmic domain. The extracellular domain, further divided into S1 and S2 subunits, is responsible for receptor recognition and binding. The S1 subunit contains the Receptor Binding Domain (RBD), which is crucial for the virus's attachment to and entry into host cells. The RBD specifically interacts with the host cell receptor, facilitating the initial step of infection. The S2 subunit, on the other hand, is responsible for membrane fusion. It contains a fusion peptide that inserts into the host cell membrane, initiating the fusion process. This fusion allows the virus's genetic material to be released into the host cell, initiating the infection process.

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