MERS-CoV (NCoV / Novel coronavirus) Spike Protein fragment (aa 383-502, Fc Tag)

Catalog Number: **40071-V05B**

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General Information

Gene Name Synonym:

S; S; S1

Protein Construction:

A DNA sequence encoding the spike protein fragment (Human betacoronavirus 2c EMC/2012)(AFS88936.1)(Cys383-Lys502) was fused with Fc region of mouse IgG at the C-terminus.

Source: MERS-CoV

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized Spike (HCoV-EMC/2012) (Cat: 40071-V05B) at 10 μg/ml (100 μl/well) can bind biotinylated human ACE2-Fc (Cat: 10108-H02H) with a linear range of 0.03-4.0 μg/ml.

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Cys 383

Molecular Mass:

The recombinant spike protein fragment (Human betacoronavirus 2c EMC/2012) comprises 354 amino acids and has a predicted molecular mass of 39.7 kDa. It migrates as an approximately 44 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 100mM Glycine, 10mM Nacl, pH 7.0.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

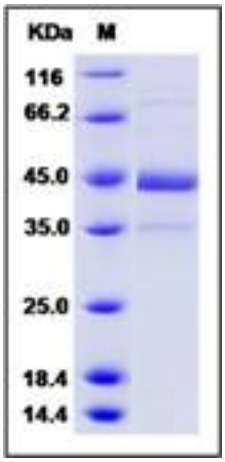
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell: they are essential for both host specificity and viral infectivity. The term 'peplomer' is typically used to refer to a grouping of heterologous proteins on the virus surface that function together. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. Most notable is severe acute respiratory syndrome (SARS). The severe acute respiratory syndrome-coronavirus (SARS-CoV) spike (S) glycoprotein alone can mediate the membrane fusion required for virus entry and cell fusion. It is also a major immunogen and a target for entry inhibitors. The SARS-CoV spike (S) protein is composed of two subunits; the S1 subunit contains a receptor-binding domain that engages with the host cell receptor angiotensin-converting enzyme 2 and the S2 subunit mediates fusion between the viral and host cell membranes. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity, during infection with SARS-CoV.

References

1.Shen S, *et al*. (2007) Expression, glycosylation, and modification of the spike (S) glycoprotein of SARS CoV. Methods Mol Biol. 379: 127-35.
2.Du L, *et al*. (2009) The spike protein of SARS-CoV--a target for vaccine and therapeutic development. Nat Rev Microbiol. 7 (3): 226-36.
3.Xiao X, *et al*. (2004) The SARS-CoV S glycoprotein. Cell Mol Life Sci. 61 (19-20): 2428-30.