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Datasheet for ABIN7198816

MERS-Coronavirus Spike Protein (His tag)

2 Images

Overview

Quantity:	100 µg
Target:	MERS-Coronavirus Spike (MERS-CoV S)
Origin:	Middle East Respiratory Syndrome Coronavirus (MERS-CoV)
Source:	Baculovirus infected Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This MERS-Coronavirus Spike protein is labelled with His tag.

Product Details

Purpose:	Recombinant MERS-CoV Spike/S1 Protein (S1 Subunit, aa 1-725, His Tag)
Sequence:	Met1-Glu725
Characteristics:	A DNA sequence encoding the spike protein S1 Subunit MERS-CoV (AFS88936.1)(Met1-Glu725) was fused with a polyhistidine tag at the C-terminus.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin Level:	< 1.0 EU per µg of the protein as determined by the LAL method
Biological Activity Comment:	1. Measured by its binding ability in a functional ELISA. Immobilized Spike Protein S1 (aa 1-725) (Cat: PKSV030240) at 10 µg/ml (100 µl/well) can bind biotinylated human DPP4 (Cat: PKSH033811). The EC50 of of biotinylated DPP4 (Cat: PKSH033811) is 0.52-1.22 µg/ml. 2. Measured by its binding ability in a functional ELISA. Immobilized Spike Protein S1 (aa 1-725) (Cat: PKSV030240) at 10 µg/ml (100 µl/well) can bind biotinylated Fc-DPP4 (Cat: PKSH030456). The EC50 of biotinylated Fc-DPP4 (Cat: PKSH030456) is 0.02-0.06 µg/ml.

Target Details

Target: MERS-Coronavirus Spike (MERS-CoV S)

Alternative Name: MERS S protein ([MERS-CoV S Products](#))

Background: The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2, DPP4, dipeptidyl peptidase-4, APN, aminopeptidase N, CEACAM, carcinoembryonic antigen-related cell adhesion molecule 1, Sia, sialic acid, O-ac Sia, O-acetylated sialic acid. The spike is 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. It's been reported that SARS-CoV-2 (COVID-19 coronavirus, 2019-nCoV) can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity. The main functions for the Spike protein are summarized as: Mediate receptor binding and membrane fusion, Defines the range of the hosts and specificity of the virus, Main component to bind with the neutralizing antibody, Key target for vaccine design, Can be transmitted between different hosts through gene recombination or mutation of the receptor binding domain (RBD), leading to a higher mortality rate.

Synonym: coronavirus s1 Protein, MERS-CoV, coronavirus s2 Protein, MERS-CoV, coronavirus spike Protein, MERS-CoV, cov spike Protein, MERS-CoV, nCoV RBD Protein, MERS-CoV, nCoV s1 Protein, MERS-CoV, nCoV s2 Protein, MERS-CoV, nCoV spike Protein, MERS-CoV, RBD Protein, MERS-CoV, S Protein, MERS-CoV, s1 Protein, MERS-CoV, Spike RBD Protein, MERS-CoV

Molecular Weight: 79.9kDa

Application Details

Comment: 94 kDa

Restrictions: For Research Use only

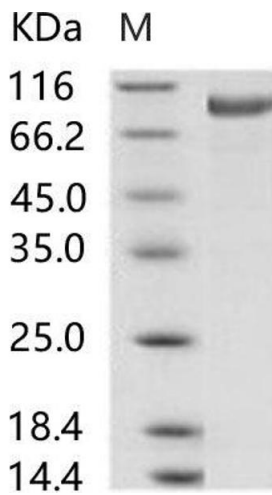
Handling

Format: Lyophilized

Handling

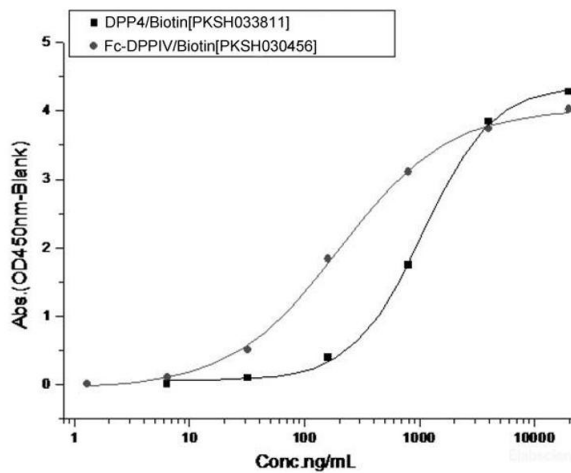
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile 20 mM Tris, 500 mM NaCl, 10 % glycerol, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Images



Western Blotting

Image 1.



ELISA

Image 2.