

Recombinant MERS Coronavirus Spike Glycoprotein (S1), His-tagged

Cat. No. HUM-312 **Lot. No.** (See product label)

SPECIFICATION

Product Overview

MERS Coronavirus Spike Glycoprotein (S1), His-Tag is a recombinant protein, cloned and expressed in E. coli.

Tag

His

Background

Middle East respiratory syndrome (MERS), also known as camel flu, is a viral respiratory infection caused by the MERS-coronavirus (MERS-CoV). MERS-CoV is a betacoronavirus derived from bats. Since April 2012, cases of the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) have been identified in middle east and other countries, causing severe illnesses with ~35% mortality. Spread between humans typically requires close contact with an infected person. Camels have been shown to have antibodies to MERS-CoV but the exact source of infection in camels was not identified. Camels are also believed to be involved in transmission to humans. MERS-CoV genomes are phylogenetically classified into two clades, Clade A and B. Early cases of MERS were of Clade A clusters (EMC/2012 and Jordan-N3/2012), whilst more recent cases have been Clade B (Chu et al., 2014).

Three MERS-CoV proteins are expressed on the envelope of the virus: the surface spike protein (S), the membrane glycoprotein (M), and the envelope protein (E). The S protein is responsible for viral entry via attachment to and fusion with the host cell membrane. Spike protein has two domains, S1 and S2; the S1 domain is responsible for cellular tropism and interaction with target cell, whilst the S2 domain is responsible for membrane fusion. MERS-CoV has pandemic potential but there is currently no specific vaccine or treatment for the disease. However, the C terminus of S1 contains

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a receptor binding domain with potential for vaccine development and use in diagnostics (Xu et al., 2019). To this end, a peptide from amino acids 56 to 295 of spike protein S1 was expressed and purified from E. coli, with a 6 x His tag is attached to its C-terminus.

Purity	Purity >95% as determined by 10% PAGE (Coomassie staining).
Applications	For use in ELISA and other immunoassays.
Notes	This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.
Type	Recombinant
ClassID 1	Infectious Disease

GENE INFORMATION

Synonyms	MERS Coronavirus Spike Glycoprotein (S1)
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