

Active Recombinant MERS-CoV Spike Protein (18-1296aa), C-His-tagged

Cat. No. S-13M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant MERS-CoV Spike (18-1296aa), fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.
Species	MERS-CoV
Source	Insect Cells
ProteinLength	18-1296 aa
Description	MERS-CoV, which causes the Middles East Respiratory Syndrome (MERS), belongs to a family of viruses known as coronaviruses. MERS-CoV was first identified in the Kingdom of Saudi Arabia in 2012, which is a single and positive stranded RNA virus. Dromedary camels are widely considered as the source of the transmission of MERSCoV. The rate of human transmission among household contacts of MERS patients has been approximately 5 % based on serological analysis. MERS-CoV has four structural proteins, known as the S (spike), E (envelope), M (membrane), and N (nucleocapsid) proteins. The spike protein, responsible for allowing the virus to attach to and fuse with the membrane of a host cell and 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. MERS-CoV S mediates viral attachment and fusion to human cells via human cellular receptor DPP4, also

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

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known as CD26. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity.

Form

Liquid

Bio-activity

Measured by its binding ability in a functional ELISA with Human DPPIV/CD26.

Molecular Mass

141.6 kDa(1285 aa)

AA Sequence

YVDVGPDSVKSACIEVDIQQTFFDKTWPRPIDVSKADGIIPQGRITYSNITITYQGLFP
YQGDHGDMMYVYSAGHATGTPQKLFVANYSQDVKQFANGFVVRIGAAANSTGTVII
SPSTSATIRKIYPFMLGSSVGNFSDGKMGRFFNHTLVLLPDGCGTLLRAFYCILEPR
SGNHCPAGNSYTSFATYHTPATDCSDGNYNRNASLNSFKEYFNLRNCTFMYTYNIT
EDEILEWFGITQTAQGVHLFSSRYVDLYGGNMFQFATLPVYDTIKYYSIIPHSIRSIQS
DRKAWAAFYVYKLQPLTFLDFSVDGYIRRAIDCGFNDLSQLHCSYESFDVESGVYS
VSSFEEKPSGSVVEQAEGVECDFSPLLSGTTPPVYNFKRLVFTNCNYNLTKLLSLFS
VNDFTCSQISPAAIASNCYSSILIDYFSYPLSMKSDLSVSSAGPISQFNYKQSFNPT
CLILATVPHNLTTITKPLKYSYINKCSRLLSDDRTEVPQLVNANQYSPCVSIVPSTVWE
DGDYYRKQLSPLEGGGWLVASGSTVAMTEQLQMGGFQITVQYGTDTNSVCPKLEFA
NDTKIASQLGNCVEYSYLVSGRGVFQNCCTAVGVRQQRFFVYDAYQNLVGYYSDDG
NYYCLRACVSVPVSVIYDKETKTHATLFGSVACEHISSTMSQYSRSTRSMLKRRDST
YGPLQTPVGCVLGLVNSSLFVEDCKLPLGQSLCALPDTPSTLTPRSVRSVPGEMRL
ASIAFNHPIQVDQLNSSYFKLSIPTNFSFGVTQEYIQTTIQKVTVDCQYVCNGFQKC
EQLLREYQGQFCSKINQALHGANLRQDDSVRNLFASVKSSQSSPIPGFGGDFNLTL
EPVSISTGSRARSASIEDLLFDKVTIADPGYMQGYDDCMQQGPASARDLICAQYVAG
YKVLPLMDVNMEAAYTSSLLGSIAGVGWTAGLSSFAAIPFAQSIFYRLNGVGITQQV
LSENQKLIANKFNQALGAMQTGFTTTNEAFQKVQDAVNNAQALSKLASELSNTFG
AISASIGDIIQRLDVLEQDAQIDRLINGRLTTLNAFVAQQQLVRSESAALSAQLAKDKVN
ECVKAQSKRSGFCGQGTHIVSFVNNAPNGLYFMHVGYYPSNHIEVVSAYGLCDAAN
PTNCIAPVNGYFIKTNNTRIVDEWSYTGSSFYAPEPITSLNTKYVAPQVQTYQNISTNLP

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	PPLLGNSTGIDFQDELDEFFKNVSTSIPNFGSLTQINTTLLDLTYEMLSLQQVVKALNE SYIDLKELGNYTTYYNKWP
Endotoxin	< 1 EU/μg of protein (determined by LAL method)
Purity	> 85% by SDS-PAGE
Applications	SDS-PAGE, Bioactivity
Notes	For research use only. This product is not intended or approved for human, diagnostics or veterinary use.
Storage	Can be stored at +2 to +8 centigrade for 1 week. For long term storage, aliquot and store at -20 to -80 centigrade. Avoid repeated freezing and thawing cycles.
Concentration	0.25 mg/mL (determined by Bradford assay)
Storage Buffer	Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

GENE INFORMATION

Gene Name	S spike protein [Middle East respiratory syndrome-related coronavirus]
Official Symbol	S
Synonyms	S; spike protein; surface glycoprotein
Gene ID	14254594
Protein Refseq	YP_009047204

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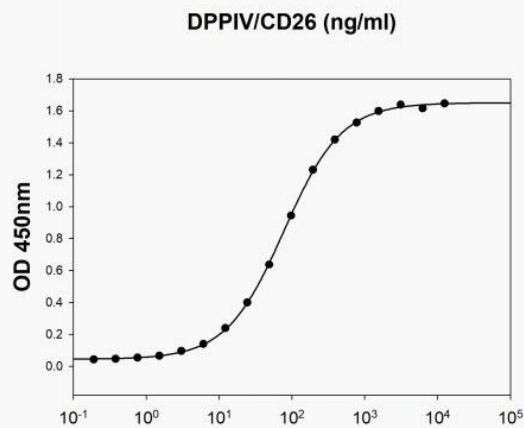
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UniProt ID

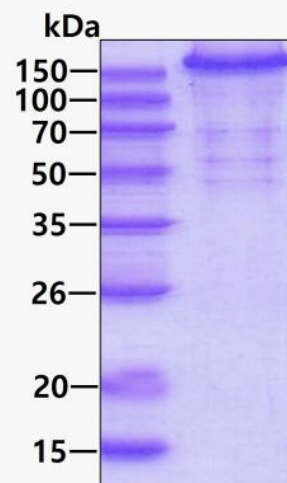
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Biological Activity



MERS-CoV Spike is coated at 2 µg/mL (100 µL/well) can bind human DPPIV/CD26 in a functional ELISA assay.

SDS-PAGE



3 µg by SDS-PAGE under reducing condition and visualized by coomassie blue

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