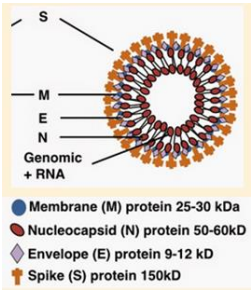
ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Recombinant (HEK) Mouse Dipeptidyl peptidase 4 (DPP4)

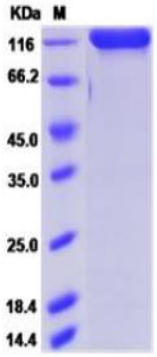
☐ **Cat** # DPP45-R-10 Recombinant (HEK) Mouse Dipeptidyl peptidase 4 (DPP4) protein (29-760 a.a, hIgG1-Fc-tag, >95%, low Endotoxin) **SIZE**: 10 ug

MERS is a viral respiratory infection caused by the newly identified **MERS-coronavirus (MERS-CoV).** MERS-CoV is a betacoronavirus derived from bats. Camels have been shown to have antibodies to MERS-CoV, but the exact source of infection in camels has not been identified. A strain of MERS-CoV known as HCoV-EMC/2012 found in the first patient in London in 2012 was found to have a 100% match to Egyptian tomb bats. Early reports compared the virus to severe acute. respiratory syndrome (SARS), and it has been referred to as Saudi Arabia's SARS-like virus. ERS can range from asymptomatic disease to severe pneumonia leading to the acute respiratory distress syndrome. Renal failure, disseminated intravascular coagulation (DIC) and pericarditis have also been reported. MERS have high fatality rate, 77 deaths in 187 confirmed cases. MERS-CoV has been reported or by direct or indirect contact with others who have a travel history consistent with exposure in the Middle East. However, the origin of the infection in most cases remains unknown. Sera samples from European sheep, goats, cattle, and other camelids had no such antibodies. Human or animals diagnostic serology is based upon PCR or ELISA or antibody neutralization tests.
The virus MERS-CoV is a new member of the beta group of coronavirus, Betacoronavirus, lineage C. MERS-CoV genomes are phylogenetically classified into two clades, clade A and B. and is more closely related to the bat coronaviruses HKU4 and HKU5 (lineage 2C) than it is to SARS-CoV (lineage 2B) (2, 9), sharing more than 90% sequence identity with their closest relationships, bat coronaviruses HKU4 and HKU5.



Coronaviruses are a positive ssRNA genome of about 27-32kb that codes for structural protein genes - namely the **Spike (S), Envelope (E), Membrane (M), and Nucleocapsid (N)** genes - as well as the Polymerase. The presence of MERS viral antibodies (N, E and S) have been used to detect the infected animal or humans. MERS-CoV utilizes receptor, dipeptidylpeptidase 4 (DPP4), for binding to DPP4-expressing cells via the Spike protein. **S1** subunit mediates virus binding to cells expressing **DPP4** through its **receptor-binding domain** (RBD, 367-606 aa) region and an S2 subunit that mediates virus-cell membrane fusion. A truncated RBD domain (377-588)-Fc protein binds efficiently to DPP4. Antibodies to the RBD domain also protect animals from MERS infection.

Source of Antigen



MERS DDP4 was fused with the Fc region of region of human IgG1 and expressed in HEK cells and purified (29-760 a.a, >95%, ~112 kDa) Lyophilized from sterile PBS [pH 7.4]. Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. (see lot specific conc. on vial).
It is suitable for ELISA, Western or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Endotoxin: <1 EU/ug of protein by LAL method.

Storage

Short-term: unopened, undiluted vials for less than a week at **4°C**.

Long-term: at **–20°C** or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at **–20°C** or below.

Shipping: **4°C** for solutions and room temp for powder.

Recommended Usage

Western Blotting: load 100-200 ng/well.

ELISA (50-100 ng antigen/well).

General References: Sandervan (2012) mBio.3:e00473-12.2; .Muller MA (2012) mBio3(6):e00515-12.; ChanJF (2012) JInfect.65(6):477-89. Hemida, MG (2013) Euro Surveillance 18 (50). Guery B (2013) Lancet; 381:2265.

*This product is for In vitro research use only.

Related material available from ADI

DPP41-A	Rabbit anti-human (mouse, rat) DPP4 peptide IgG, aff pure
DPP45-R-10	Recombinant (HEK) Mouse Dipeptidyl peptidase 4 (DPP4) protein (29-760 a.a, hIgG1-Fc-tag, >95%, low Endotoxin)
DPP46-R-10	Recombinant (HEK) Human Dipeptidyl peptidase 4 (DPP4) protein (34-766 a.a, His-tag, >95%, low Endotoxin)
DPP47-R-10	Recombinant (HEK) Human DPP4 protein (29-766 a.a, hIgG-Fc-tag, >95%, low Endotoxin)
DPP48-N-1	Purified Human Placenta Dipeptidyl Peptidase IV (DPP4), active
MERS121-A	Rabbit anti-MERS Spike protein (1-1297 a.a) IgG, aff pure
MERS35-R-10	Recombinant (Sf9) MERS-CoV RBD (367-606 a.a, Rb Fc-tag, ~51 kda, >80%, low Endotoxin), active
MERS36-R-10	Recombinant (Sf9) Purified MERS-CoV RBD (383-502 a.a, Rb Fc-tag, ~42 kda, >85%, low Endotoxin), active
MERS37-R-10	Recombinant (Sf9) Purified MERS-CoV RBD (367-606 a.a, His-tag, ~28 kda, low Endotoxin), active
MERS38-R-10	Recombinant (Sf9) Purified MERS-CoV RBD (383-502 a.a, Mouse Fc-tag, ~44 kda, low Endotoxin), active
MERSNP11-M	Mouse monoclonal Anti-MERS-CoV Nucleoprotein/NP (1-413 a.a) IgG, aff pure
MERSNP12-A	Rabbit Anti-MERS-CoV Nucleoprotein/NP (1-413 a.a) IgG, aff pure
MERSNP15-R-10	Recombinant (Sf9) MERS-CoV Nucleoprotein NP (1-413 aa, His-tag, ~47 kda, low Endotoxin, >95%)
MERSS126-R-10	Recombinant (Sf9) Purified MERS Spike protein ECD (1-1297 a.a, His-tag, ~157 kda, low Endotoxin)
MERSS12-A	Rabbit Anti-MERS-CoV Spike protein S1 protein peptide, C-terminal IgG, aff pure
MERSS15-R-10	Recombinant (HEK) Purified MERS-CoV Spike protein S1 (18-725 a.a, His-tag, ~94 kda, low Endotoxin), active
MERSS16-R-10	Recombinant (Sf9) Purified MERS-CoV Spike protein S1 (18-725 a.a, His-tag, ~94 kda, low Endotoxin), active

DPP45-R-10 240524 141022P

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