abcam

ab314444

Anti-MAVS antibody [EPR28262-28]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR28262-28
Purification technique	Affinity purification Protein A
Concentration	0.516 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Target data

See full target information Mavs

Function Adapter required for innate immune defense against viruses (PubMed:24037184). Acts downstream of DHX33, RIGI and IFIH1/MDA5, which detect intracellular dsRNA produced during viral replication, to coordinate pathways leading to the activation of NF-kappa-B, IRF3 and IRF7, and to the subsequent induction of antiviral cytokines such as IFN-beta and RANTES (CCL5) (PubMed:24037184). Peroxisomal and mitochondrial MAVS act sequentially to create an antiviral cellular state (By similarity). Upon viral infection, peroxisomal MAVS induces the rapid interferon-independent expression of defense factors that provide short-term protection, whereas mitochondrial MAVS activates an interferon-dependent signaling pathway with delayed kinetics, which amplifies and stabilizes the antiviral response (By similarity). May activate the same pathways following detection of extracellular dsRNA by TLR3 (By similarity). May protect cells from apoptosis (By similarity). Involved in NLRP3 inflammasome activation by mediating NLRP3 recruitment to mitochondria (PubMed:23582325).

Storage

Shipped at conditions Conditional Ambient

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	MAVS also known as mitochondrial antiviral-signaling protein is a critical adaptor protein involved in the innate immune response to viral infections. This protein with a molecular weight of approximately 56 kDa is expressed on the mitochondrial membrane. It plays a major role in antiviral defense by transmitting signals from cytosolic pattern recognition receptors like RIG-I-like receptors to initiate downstream immune responses. MAVS can also be referred to as IPS-1 VISA or CARDIF in scientific literature.
Biological function summary	The MAVS protein activates important signaling cascades to produce type I interferons and other cytokines which are essential in the antiviral response. MAVS forms a complex with other proteins on the mitochondrial membrane helping to coordinate a rapid immune reaction to viral pathogens. It acts by amplifying the signal from RIG-I and MDA5 facilitating their role in the recognition of viral RNA. By recruiting downstream signaling molecules MAVS enables the activation of transcription factors like IRF3 and NF-kB.

Pathways	MAVS plays a central role in the signaling pathways that regulate innate immunity including the RIG-I-like receptor signaling pathway and the NF-kB pathway. It interacts with various proteins such as TRIF and STING in the pathways to modulate immune responses. These pathways help trigger the production of antiviral substances and maintain homeostasis within the body's defense mechanisms. MAVS provides a platform for the assembly of signaling complexes which are necessary for the propagation and amplification of the immune response signal.
Associated diseases and disorders	MAVS is associated with conditions such as viral infections and autoimmune diseases. Dysregulation of MAVS activity has been linked to systemic lupus erythematosus where abnormal immune signaling may occur. MAVS also has connections with other proteins such as TRAF3 and TRAF6 which contribute to disease pathogenesis. Understanding the role of MAVS in these conditions may provide insights into therapeutic targets for improving disease outcomes.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

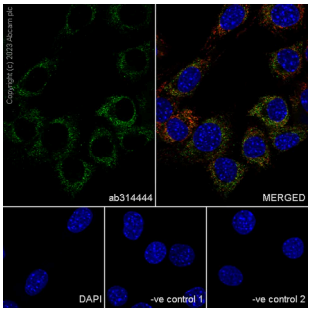
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

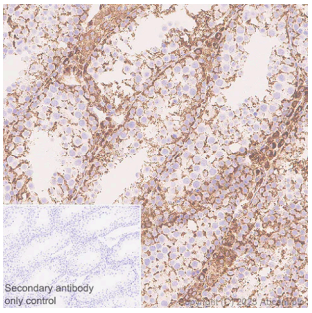
Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images



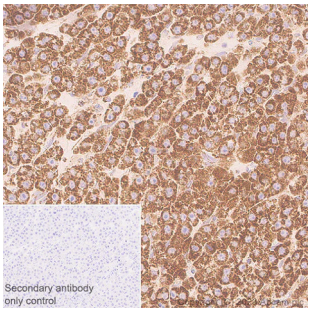
Immunocytochemistry/ Immunofluorescence - Anti-MAVS antibody [EPR28262-28] (ab314444)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized C2C12 (mouse myoblast) cells labelling MAVS with ab314444 at 1/50 (10.46 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green). Confocal image showing cytoplasmic staining in C2C12 cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). Anti-COX IV mouse monoclonal antibody - Mitochondrial Marker was used to counterstain at 1/50 (5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.



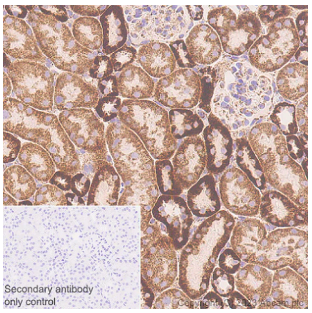
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAVS antibody [EPR28262-28] (ab314444)

Immunohistochemical analysis of paraffin-embedded mouse testis tissue labeling MAVS with ab314444 at 1/500 (1.046 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on mouse testis. The section was incubated with ab314444 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



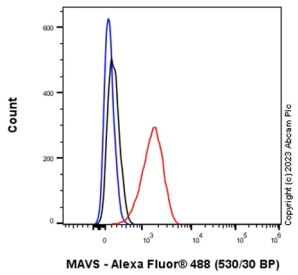
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAVS antibody [EPR28262-28] (ab314444)

Immunohistochemical analysis of paraffin-embedded mouse liver cancer tissue labeling MAVS with ab314444 at 1/500 (1.046 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on mouse liver cancer. The section was incubated with ab314444 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



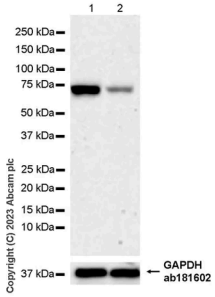
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAVS antibody [EPR28262-28] (ab314444)

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling MAVS with ab314444 at 1/500 (1.046 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on mouse kidney. The section was incubated with ab314444 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-MAVS antibody [EPR28262-28] (ab314444)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized C2C12 (mouse myoblast) cells labelling MAVS with ab314444 at 1/500 dilution (0.1 ug)/Red (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Western blot - Anti-MAVS antibody [EPR28262-28] (ab314444)

Blocking and diluting buffer and concentration: 5% NFDM/TBST In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.
All lanes:
Western blot - Anti-MAVS antibody [EPR28262-28] (ab314444) at 1/1000 dilution

Lane 1:
NIH/3T3 (mouse embryonic fibroblast) transfected with scrambled siRNA control whole cell lysate at 60 µg

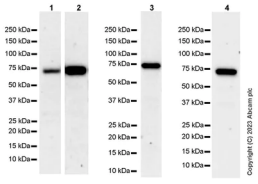
Lane 2:
NIH/3T3 transfected with siRNA specifically targeting MAVS whole cell lysate at 60 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 75 kDa

Exposure time: 180s



Western blot - Anti-MAVS antibody [EPR28262-28] (ab314444)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Lysates were freshly made and used for Western blotting immediately to minimize protein degradation. Exposure time: Lane 1-3: 180 seconds, Lane 4: 48 seconds.
All lanes:
Western blot - Anti-MAVS antibody [EPR28262-28] (ab314444) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

Lane 2:
Mouse testis tissue lysate at 20 µg

Lane 3:
C2C12 (mouse myoblast) whole cell lysate at 20 µg

Lane 4:
Hepa1-6 (mouse hepatoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 75 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.