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MAVS Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13783b

Product Information

Application	WB, E
Primary Accession	Q7Z434
Other Accession	NP_065797.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33921
Calculated MW	56528
Antigen Region	477-505

Additional Information

Gene ID	57506
Other Names	Mitochondrial antiviral-signaling protein, MAVS, CARD adapter inducing interferon beta, Cardif, Interferon beta promoter stimulator protein 1, IPS-1, Putative NF-kappa-B-activating protein 031N, Virus-induced-signaling adapter, VISA, MAVS, IPS1, KIAA1271, VISA
Target/Specificity	This MAVS antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 477-505 amino acids from the C-terminal region of human MAVS.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MAVS Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAVS {ECO:0000303|PubMed:16125763, ECO:0000312|HGNC:HGNC:29233}
Function	Adapter required for innate immune defense against viruses

(PubMed:16125763, PubMed:16127453, PubMed:16153868, PubMed:16177806, PubMed:19631370, PubMed:20127681, PubMed:20451243, PubMed:21170385, PubMed:23087404, PubMed:27992402, PubMed:33139700, PubMed:37582970). 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 IFNB and RANTES (CCL5) (PubMed:16125763, PubMed:16127453, PubMed:16153868, PubMed:16177806, PubMed:19631370, PubMed:20127681, PubMed:20451243, PubMed:20628368, PubMed:21170385, PubMed:23087404, PubMed:25636800, PubMed:27736772, PubMed:33110251). Peroxisomal and mitochondrial MAVS act sequentially to create an antiviral cellular state (PubMed:20451243). 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 (PubMed:20451243). May activate the same pathways following detection of extracellular dsRNA by TLR3 (PubMed:16153868). May protect cells from apoptosis (PubMed:16125763). Involved in NLRP3 inflammasome activation by mediating NLRP3 recruitment to mitochondria (PubMed:23582325).

Cellular Location

Mitochondrion outer membrane; Single-pass membrane protein. Mitochondrion. Peroxisome

Tissue Location

Present in T-cells, monocytes, epithelial cells and hepatocytes (at protein level). Ubiquitously expressed, with highest levels in heart, skeletal muscle, liver, placenta and peripheral blood leukocytes.

Background

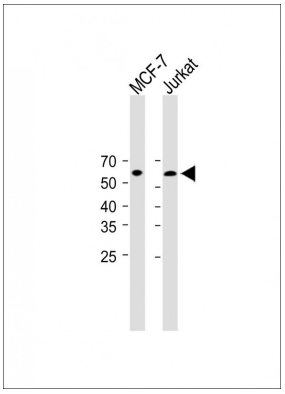
Double-stranded RNA viruses are recognized in a cell type-dependent manner by the transmembrane receptor TLR3 (MIM 603029) or by the cytoplasmic RNA helicases MDA5 (MIM 606951) and RIGI (ROBO3; MIM 608630). These interactions initiate signaling pathways that differ in their initial steps but converge in the activation of the protein kinases IKKA (CHUK; MIM 600664) and IKKB (IKBKB; MIM 603258), which activate NFKB (see MIM 164011), or TBK1 (MIM 604834) and IKKE (IKBKE; MIM 605048), which activate IRF3 (MIM 603734). Activated IRF3 and NFKB induce transcription of IFNB (IFNB1; MIM 147640). For the TLR3 pathway, the intermediary molecule before the pathways converge is the cytoplasmic protein TRIF (TICAM1; MIM 607601). For RIGI, the intermediary protein is mitochondria-bound IPS1 (Sen and Sarkar, 2005 [PubMed 16239922]).

References

Sebastiani, P., et al. Science (2010) In press :
Wang, X., et al. Cell. Mol. Immunol. 7(5):341-348(2010)
Graef, K.M., et al. J. Virol. 84(17):8433-8445(2010)
Wei, C., et al. J. Immunol. 185(2):1158-1168(2010)
Onoguchi, K., et al. PLoS Pathog. 6 (7), E1001012 (2010) :

Images

All lanes : Anti-MAVS Antibody (C-term) at 1:2000 dilution Lane 1: MCF-7 whole cell lysate Lane 2: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615)



at 1/15000 dilution. Observed band size : 57kDa
Blocking/Dilution buffer: 5% NFDM/TBST.