

PRODUCT INFORMATION



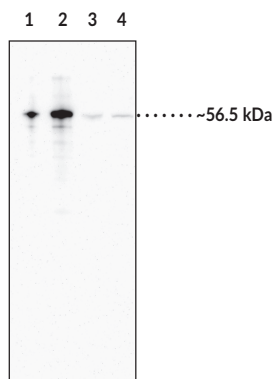
MAVS Monoclonal Antibody (Clone 7B9)

Item No. 26355

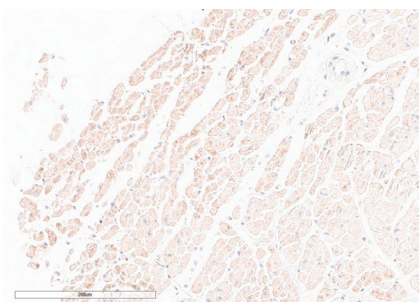
Overview and Properties

Contents:	This vial contains 100 µg of protein G-purified antibody.
Synonyms:	CARD Adapter-Inducing Interferon-β, Interferon-β Promoter Stimulator Protein 1, Mitochondrial Antiviral-Signaling Protein, Virus-Induced Signaling Adapter
Immunogen:	Full-length recombinant human MAVS protein
Species Reactivity:	(+) Human, mouse; other species not tested
Uniprot No.:	Q7Z434
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol, and 0.02% sodium azide
Clone:	7B9
Host:	Mouse
Isotype:	IgG2b
Applications:	ELISA, Immunohistochemistry (IHC), and Western blot (WB); the recommended starting dilution for ELISA and WB is 1:1,000 and 1:200 for IHC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

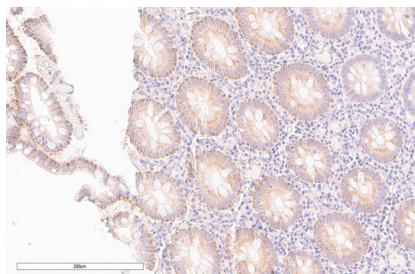
Images



Lane 1: MAVS Recombinant Protein (1 ng)
Lane 2: MAVS Recombinant Protein (5 ng)
Lane 3: HT-29 Cell Lysate (50 µg)
Lane 4: Huh-7 Cell Lysate (50 µg)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human heart tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with MAVS Monoclonal Antibody (clone 7B9) (Item No. 26355) at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human colon tissue after heat induced antigen retrieval in pH 6.0 citrate buffer. After incubation with MAVS monoclonal antibody (clone 7B9) (Item No. 26355) at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Mitochondrial antiviral-signaling protein (MAVS) is a mitochondrial membrane-bound adapter protein that initiates antiviral immunity.¹ MAVS is activated upon viral infection by the dsRNA-sensing receptors RIG-I and MDA5 and by mitochondrial reactive oxygen species (ROS). Upon activation, MAVS polymerizes and binds to TANK-binding kinase 1 (TBK1) and IKK ϵ , which form a signaling platform to activate IFN regulatory factor 3 (IRF3) and NF- κ B, respectively.^{1,2} MAVS also mediates recruitment of the NLRP3 inflammasome to the mitochondria and activates caspase-1 to release IL-1 β in response to non-crystalline inflammasome activators.³ Embryonic fibroblasts, peritoneal and bone marrow-derived macrophages (BMDMs), and conventional, but not plasmacytoid, dendritic cells from *Mavs*^{-/-} mice exhibit reduced Sendai virus-induced increases in IFN- α and IFN- β secretion.⁴ Serum viral titers are increased and survival is decreased in *Mavs*^{-/-} mice infected with vesicular stomatitis virus compared with wild-type controls. MAVS-deficient, SLE-prone *Fcgr2b*^{-/-} mice have decreased serum levels of antinuclear autoantibodies and increased survival compared with MAVS-expressing *Fcgr2b*^{-/-} mice.⁵ Aggregates of MAVS and plasma levels of IFN- β and the autoantibodies Sm and UN1RNP are increased in peripheral blood mononuclear cells (PBMCs) isolated from patients with systemic lupus erythematosus (SLE).⁶ Cayman's MAVS Monoclonal Antibody (Clone 7B9) can be used for ELISA, immunohistochemistry, and Western blot applications. The antibody recognizes MAVS at 56.5 kDa from human samples.

References

1. Liu, B. and Gao, C. Regulation of MAVS activation through post-translational modifications. *Curr. Opin. Immunol.* **50**, 75-81 (2018).
2. Hou, F., Sun, L., Zheng, H., *et al.* MAVS forms functional prion-like aggregates to activate and propagate antiviral innate immune response. *Cell* **146(3)**, 448-461 (2011).
3. Subramanian, N., Natarajan, K., Clatworthy, M.R., *et al.* The adaptor MAVS promotes NLRP3 mitochondrial localization and inflammasome activation. *Cell* **153(2)**, 348-361 (2013).
4. Sun, Q., Sun, L., Liu, H.-H., *et al.* The specific and essential role of MAVS in antiviral innate immune responses. *Immunity* **24(5)**, 633-642 (2006).
5. Sun, W., Wang, H., Qi, C.-F., *et al.* Antiviral adaptor MAVS promotes murine lupus with a B cell autonomous role. *Front. Immunol.* **10(2452)**, (2019).
6. Shao, W.-H., Shu, D.H., Zhen, Y., *et al.* Prion-like aggregation of mitochondrial antiviral signaling protein in lupus patients is associated with increased levels of type I interferon. *Arthritis Rheumatol.* **68(11)**, 2697-2707 (2016).

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