SANTA CRUZ BIOTECHNOLOGY, INC.

MAVS (C-1): sc-365333

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MAVS (mitochondrial antiviral-signaling protein), also known as IPS1, KIAA1271, VISA or CARDIF, is a 540 amino acid protein that contains one CARD domain and several transmembrane domains and localizes to the outer mitochondrial membrane. Expressed throughout the body with highest expression in liver, heart, placenta, skeletal muscle and peripheral blood leukocytes, MAVS functions downstream of proteins, such as RIG-I, that detect double-stranded (ds) viral replication and is required for proper immune response against ds viral infection. MAVS is thought to activate pathways that lead to the induction of antiviral cytokines and may protect the cells from viral-induced apoptosis. MAVS function can be inactivated via cleavage by a protease complex that degrades the CARD and transmembrane domains, thereby preventing MAVS from interacting with other proteins. Three isoforms of MAVS are expressed due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: Mavs (mouse) mapping to 2 F1.

SOURCE

MAVS (C-1) is a mouse monoclonal antibody raised against amino acids 1-300 mapping within an N-terminal cytoplasmic domain of MAVS of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MAVS (C-1) is available conjugated to agarose (sc-365333 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365333 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365333 PE), fluorescein (sc-365333 FITC), Alexa Fluor® 488 (sc-365333 AF488), Alexa Fluor® 546 (sc-365333 AF546), Alexa Fluor® 594 (sc-365333 AF594) or Alexa Fluor® 647 (sc-365333 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365333 AF680) or Alexa Fluor® 790 (sc-365333 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MAVS (C-1) is recommended for detection of MAVS of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MAVS siRNA (m): sc-75756, MAVS shRNA Plasmid (m): sc-75756-SH and MAVS shRNA (m) Lentiviral Particles: sc-75756-V.

Molecular Weight of cleaved MAVS: 51-54 kDa.

Molecular Weight of endogenous MAVS: 57 kDa.

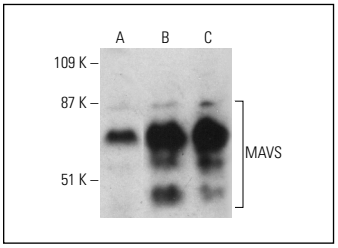
Molecular Weight of aggregated MAVS: 75 kDa.

Positive Controls: MAVS (m): 293T Lysate: sc-127129, Neuro-2A whole cell lysate: sc-364185 or BYDP whole cell lysate: sc-364368.

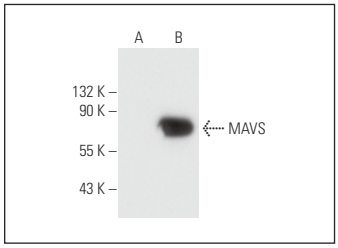
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



MAVS (C-1) HRP: sc-365333 HRP. Direct western blot analysis of MAVS expression in Neuro-2A (**A**), TK-1 (**B**) and BYDP (**C**) whole cell lysates.



MAVS (C-1): sc-365333. Western blot analysis of MAVS expression in non-transfected: sc-117752 (**A**) and mouse MAVS transfected: sc-127129 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, P., et al. 2013. UBXN1 interferes with Rig-I-like receptor-mediated antiviral immune response by targeting MAVS. Cell Rep. 3: 1057-1070.
2. Sheng, W., et al. 2018. LSD1 ablation stimulates anti-tumor immunity and enables checkpoint blockade. Cell 174: 549-563.e19.
3. Liuyu, T., et al. 2019. Induction of OTUD4 by viral infection promotes antiviral responses through deubiquitinating and stabilizing MAVS. Cell Res. 29: 67-79.
4. Chao, C.C., et al. 2019. Metabolic control of astrocyte pathogenic activity via $cPLA_2$-MAVS. Cell 179: 1483-1498.e22.
5. Hwang, M.S., et al. 2019. MAVS polymers smaller than 80 nm induce mitochondrial membrane remodeling and interferon signaling. FEBS J. 286: 1543-1560.
6. Zhang, Z.D., et al. 2020. RNF115 plays dual roles in innate antiviral responses by catalyzing distinct ubiquitination of MAVS and MITA. Nat. Commun. 11: 5536.
7. Liu, J., et al. 2021. HFE inhibits type I IFNs signaling by targeting the SQSTM1-mediated MAVS autophagic degradation. Autophagy 17: 1962-1977.
8. Gao, D., et al. 2021. TLR3 controls constitutive IFN-β antiviral immunity in human fibroblasts and cortical neurons. J. Clin. Invest. 131: e134529.
9. Sun, S., et al. 2021. Endogenous retrovirus expression activates type-I interferon signaling in an experimental mouse model of mesothelioma development. Cancer Lett. 507: 26-38.
10. Zhu, J., et al. 2021. Arginine monomethylation by PRMT7 controls MAVS-mediated antiviral innate immunity. Mol. Cell 81: 3171-3186.e8.

RESEARCH USE

For research use only, not for use in diagnostic procedures.