Anti-MAVS Antibody [PSH0-30] - BSA and Azide free

HA750604

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IHC-P, IF-Cell, IP
Molecular Wt:	Predicted band size: 56 kDa
Clone number:	PSH0-30

Description: Required for innate immune defense against viruses. 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). Peroxisomal and mitochondrial MAVS act sequentially to create an antiviral cellular state. 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. May activate the same pathways following detection of extracellular dsRNA by TLR3. May protect cells from apoptosis. 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.

Immunogen: Synthetic peptide within human MAVS aa 2-50.

Positive control: MCF7 cell lysate, C2C12 cell lysate, human colon tissue, human endometrium tissue, A431 cell.

Subcellular location: Membrane, Mitochondrion, Mitochondrion outer membrane, Peroxisome

Database links: SwissProt: Q7Z434 Human | Q8VCF0 Mouse

Recommended Dilutions:

WB	1:1,000
IHC-P	1:200-1:1,000
IF-Cell	1:100
IP	1-2μg/sample

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

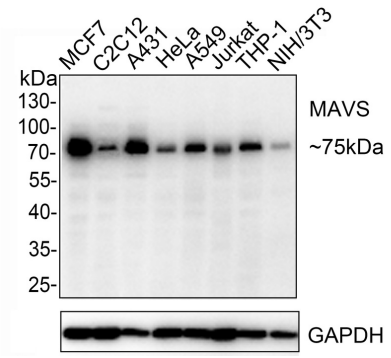

Fig1: Western blot analysis of MAVS on different lysates with Rabbit anti-MAVS antibody (HA750604) at 1/1,000 dilution.

Lane 1: MCF7 cell lysate
Lane 2: C2C12 cell lysate
Lane 3: A431 cell lysate
Lane 4: HeLa cell lysate
Lane 5: A549 cell lysate
Lane 6: Jurkat cell lysate
Lane 7: THP-1 cell lysate
Lane 8: NIH/3T3 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 56 kDa
Observed band size: 75 kDa
The molecular weight observed is consistent with that described in the literature (PMID: 16125763 and 30460894)

Exposure time: 10S;

10% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA750604) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

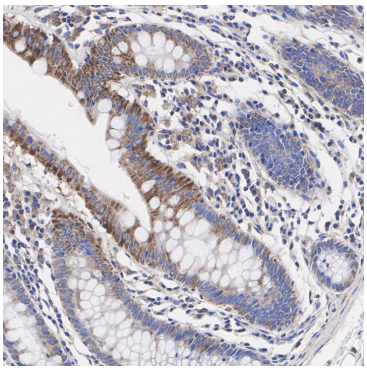

Fig2: Immunohistochemical analysis of paraffin-embedded human colon tissue with Rabbit anti-MAVS antibody (HA750604) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750604) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX

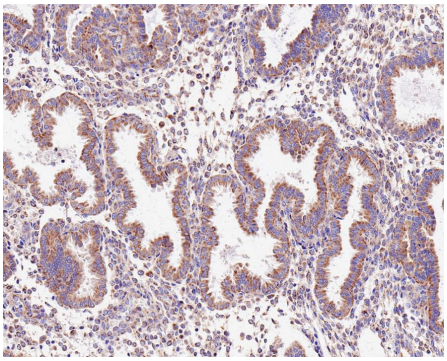

Fig3: Immunohistochemical analysis of paraffin-embedded human endometrium tissue with Rabbit anti-MAVS antibody (HA750604) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA750604) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX

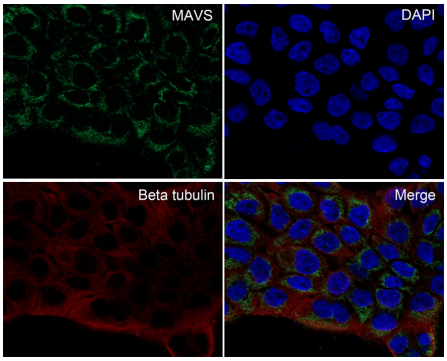

Fig4: Immunocytochemistry analysis of A431 cells labeling MAVS with Rabbit anti-MAVS antibody (HA750604) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 10 minutes at 37 ℃, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Rabbit anti-MAVS antibody (HA750604) at 1/100 dilution in 2% negative goat serum overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) was used as the secondary antibody at 1/1,000 dilution. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (Alexa Fluor® 647) were used as the secondary antibody at 1/1,000 dilution.

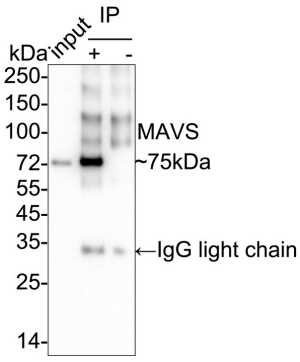

Fig5: MAVS was immunoprecipitated from 0.2 mg A431 cell lysate with HA750604 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using HA750604 at 1/1,000 dilution. Anti-Rabbit IgG for IP Nano-secondary antibody (NBI01H) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: A431 cell lysate (input)
Lane 2: HA750604 IP in A431 cell lysate
Lane 3: Rabbit IgG instead of HA750604 in A431 cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 47 seconds; ECL: K1801

Background References

1. Seth R.B., Sun L., Ea C.-K., Chen Z.J. Identification and characterization of MAVS, a mitochondrial antiviral signaling protein that activates NF-kappaB and IRF 3. Cell 122:669-682 (2005).
2. Dixit E., Boulant S., Zhang Y., Lee A.S., Odendall C., Shum B., Hacohen N., Chen Z.J., Whelan S.P., Fransen M., Nibert M.L., Superti-Furga G., Kagan J.C. Peroxisomes are signaling platforms for antiviral innate immunity. Cell 141:668-681 (2010).