abcam

Product datasheet

Anti-MDA5 antibody [EPR6743] ab126630

KO VALIDATED Recombinant RabMAb

★★★★★ 2 Abreviews 8 References 3 Images

Overview

Product name	Anti-MDA5 antibody [EPR6743]
Description	Rabbit monoclonal [EPR6743] to MDA5
Host species	Rabbit
Tested applications	**Suitable for:** WB **Unsuitable for:** Flow Cyt,IHC-P or IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	THP1 treated with LPS cell lysate.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR6743
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab126630 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ **(2)**	1/1000 - 1/10000. Predicted molecular weight: 117 kDa.

Application notes Is unsuitable for Flow Cyt,IHC-P or IP.

Target

Function RNA helicase that, through its ATP-dependent unwinding of RNA, may function to promote message degradation by specific RNases. Seems to have growth suppressive properties. Involved in innate immune defense against viruses. Upon interaction with intracellular dsRNA produced during viral replication, triggers a transduction cascade involving MAVS/IPS1, which results in the activation of NF-kappa-B, IRF3 and IRF7 and the induction of the expression of antiviral cytokines such as IFN-beta and RANTES (CCL5). ATPase activity is specifically induced by dsRNA. Essential for the production of interferons in response to picornaviruses.

Tissue specificity Widely expressed, at a low level. Expression is detected at slightly highest levels in placenta, pancreas and spleen and at barely levels in detectable brain, testis and lung.

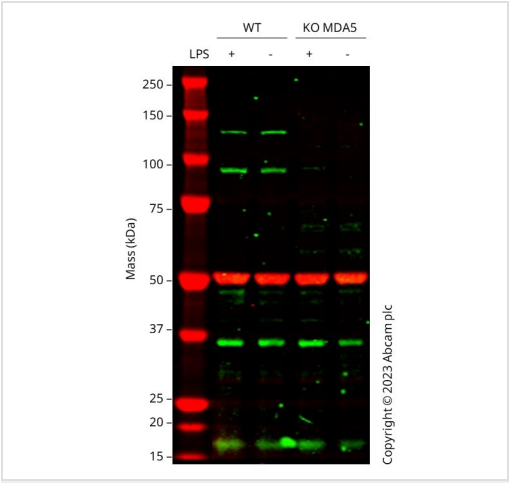
Involvement in disease Genetic variation in IFIH1 is associated with diabetes mellitus insulin-dependent type 19 (IDDM19) [MIM:610155]. A multifactorial disorder of glucose homeostasis that is characterized by susceptibility to ketoacidosis in the absence of insulin therapy. Clinical fetaures are polydipsia, polyphagia and polyuria which result from hyperglycemia-induced osmotic diuresis and secondary thirst. These derangements result in long-term complications that affect the eyes, kidneys, nerves, and blood vessels.
Note=IFIH1 is the CADM-140 autoantigen, involved in clinically amyopathic dermatomyositis (CADM). This is a chronic inflammatory disorder that shows typical skin manifestations of dermatomyositis but has no or little evidence of clinical myositis. Anti-CADM-140 antibodies appear to be specific to dermatomyositis, especially CADM. Patients with anti-CADM-140 antibodies frequently develop life-threatening acute progressive interstitial lung disease (ILD).

Sequence similarities Belongs to the helicase family.
Contains 2 CARD domains.
Contains 1 helicase ATP-binding domain.
Contains 1 helicase C-terminal domain.

Post-translational modifications During apoptosis, processed into 3 cleavage products. The helicase-containing fragment, once liberated from the CARD domains, translocate from the cytoplasm to the nucleus. The processed protein significantly sensitizes cells to DNA degradation.

Cellular localization Cytoplasm. Nucleus. May be found in the nucleus, during apoptosis.

Images



Western blot - Anti-MDA5 antibody [EPR6743] (ab126630)

All lanes : Anti-MDA5 antibody [EPR6743] (ab126630) at 1/1000 dilution

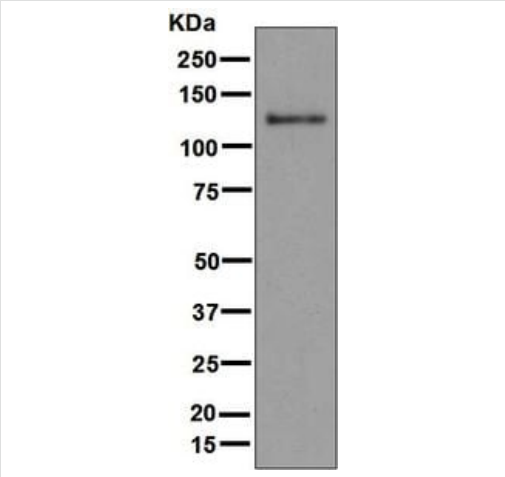
Lane 1 : Wild-type Jurkat, LPS (1 ug/mL, 24 h) cell lysate
Lane 2 : Wild-type Jurkat, vehicle control LPS (0 ug/mL, 24 h) cell lysate
Lane 3 : IFIH1 knockout Jurkat, LPS (1 ug/mL, 24 h) cell lysate
Lane 4 : IFIH1 knockout Jurkat, vehicle control LPS (0 ug/mL, 24 h) cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 117 kDa
Observed band size: 140, 90 kDa

Western blot: Anti-IFIH1 antibody [EPR6743] (ab126630) staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (**ab7291**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab126630 was shown to bind specifically to IFIH1. A band was observed at 140, 90 kDa in wild-type Jurkat cell lysates with no signal observed at this size in IFIH1 knockout cell line. To generate this image, wild-type and IFIH1 knockout Jurkat cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-MDA5 antibody [EPR6743] (ab126630)

Anti-MDA5 antibody [EPR6743] (ab126630) at 1/1000 dilution + THP1 treated with LPS cell lysate at 10 µg

Secondary

Goat anti-rabbit HRP conjugated antibody at 1/2000 dilution

Predicted band size: 117 kDa

Anti-MDA5 antibody [EPR6743] (ab126630)

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