



## Product datasheet

### Anti-MDA5 antibody ab4544

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#### Overview

<b>Product name</b>	Anti-MDA5 antibody
<b>Description</b>	Goat polyclonal to MDA5
<b>Host species</b>	Goat
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, Flow Cyt
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	<p>Synthetic peptide corresponding to Human MDA5 aa 2-14 (N terminal). Sequence:</p> <p>SNGYSTDENFRYL-C</p> <p>(Peptide available as <a href="#">ab23050</a>)</p> <p> <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a></p>
<b>Positive control</b>	IHC-P: Human pancreas tissue. Flow Cyt: K562 cells.
<b>General notes</b>	<p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	<p>pH: 7.3</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituents: Tris buffered saline, 0.5% BSA</p>
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.

<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

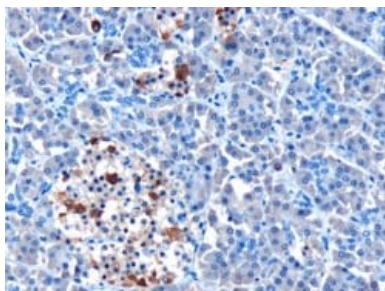
## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab4544 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
IHC-P		Use a concentration of 10 µg/ml. Perform heat mediated antigen retrieval via the microwave method before commencing with IHC staining protocol.
Flow Cyt		Use a concentration of 10 µg/ml.

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	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.
<b>Involvement in disease</b>	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 features 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).
<b>Sequence similarities</b>	Belongs to the helicase family. Contains 2 CARD domains. Contains 1 helicase ATP-binding domain. Contains 1 helicase C-terminal domain.
<b>Post-translational modifications</b>	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.
<b>Cellular localization</b>	Cytoplasm. Nucleus. May be found in the nucleus, during apoptosis.

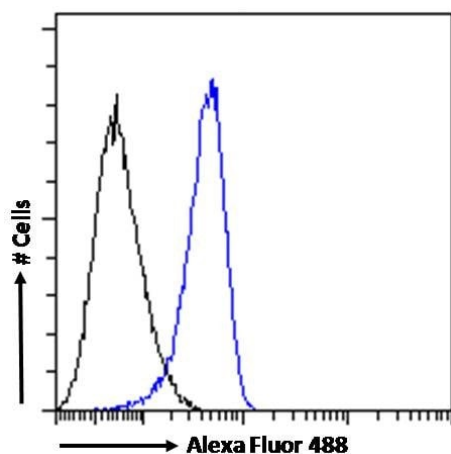


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MDA5 antibody (ab4544)

ab4544 (10ug/ml) staining human MDA5 in human pancreas by immunohistochemistry using paraffin embedded tissue.

Microwaved antigen retrieval with Tris/EDTA buffer pH9, HRP-staining.

ab4544 shows strong cytoplasmic staining of some cells in the islets of Langerhans.



Flow Cytometry - Anti-MDA5 antibody (ab4544)

Flow cytometric analysis of paraformaldehyde fixed K562 cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10 µg/ml) followed by Alexa Fluor 488<sup>®</sup> secondary antibody (1 µg/ml).

**IgG control:** Non-immunized goat IgG (black line) followed by Alexa Fluor 488<sup>®</sup> secondary antibody.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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