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**Product Name: MDA5 Rabbit Polyclonal Antibody****Catalog #: APRab13746**

For research use only.

**Summary**

<b>Description</b>	Rabbit polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC,ICC/IF,ELISA
<b>Reactivity</b>	Human,Mouse
<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Unmodified
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Concentration</b>	1mg/ml
<b>Storage</b>	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
<b>Shipping</b>	Ice bags
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

**Application**

<b>Dilution Ratio</b>	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:20000-1:40000
<b>Molecular Weight</b>	120kDa

**Antigen Information**

<b>Gene Name</b>	IFIH1
<b>Alternative Names</b>	IFIH1; MDA5; RH116; Interferon-induced helicase C domain-containing protein 1; Clinically amyopathic dermatomyositis autoantigen 140 kDa; CADM-140 autoantigen; Helicase with 2 CARD domains; Helicard; Interferon-induced with helicase C domai
<b>Gene ID</b>	64135.0
<b>SwissProt ID</b>	Q9BYX4
<b>Immunogen</b>	The antiserum was produced against synthesized peptide derived from human IFIH1. AA range:976-1025

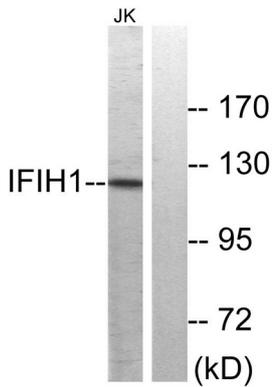
## Background

DEAD box proteins, characterized by the conserved motif Asp-Glu-Ala-Asp (DEAD), are putative RNA helicases. They are implicated in a number of cellular processes involving alteration of RNA secondary structure such as translation initiation, nuclear and mitochondrial splicing, and ribosome and spliceosome assembly. Based on their distribution patterns, some members of this family are believed to be involved in embryogenesis, spermatogenesis, and cellular growth and division. This gene encodes a DEAD box protein that is upregulated in response to treatment with beta-interferon and a protein kinase C-activating compound, mezerein. Irreversible reprogramming of melanomas can be achieved by treatment with both these agents; treatment with either agent alone only achieves reversible differentiation. Genetic variation in this gene is associated with diabetes mellitus insulin-dependendisease:Genetic variation in IFIH1 is associated with insulin-dependent diabetes mellitus 19 (IDDM19) [MIM:610155].,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.,induction:By IFN-beta and TNF-alpha.,miscellaneous:In HIV-1 infected HeLa-CD4 cells, overexpression of IFIH1 results in a great increase in the level of secreted viral p24 protein.,PTM: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.,sequence caution:Contaminating sequence. Potential poly-A sequence.,similarity:Belongs to the helicase family.,similarity:Contains 1 helicase ATP-binding domain.,similarity:Contains 1 helicase C-terminal domain.,similarity:Contains 2 CARD domains.,subcellular location:May be found in the nucleus, during apoptosis.,subunit:Interacts with MAVS. Interacts with V protein of Simian virus 5, Human parainfluenza virus 2, Mumps virus, Sendai virus and Hendra virus. Binding to paramyxoviruses V proteins prevents IFN-beta induction, and the further establishment of an antiviral state.,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.,

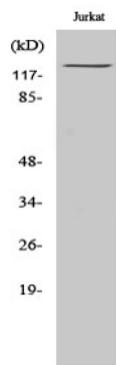
## Research Area

RIG-I-like receptor;

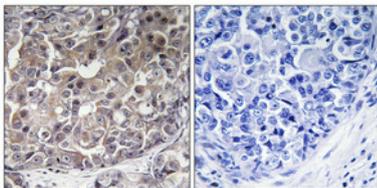
## Image Data



Western blot analysis of lysates from Jurkat cells, using IFIH1 Antibody. The lane on the right is blocked with the synthesized peptide.



Western Blot analysis of various cells using MDA5 Polyclonal Antibody



Immunohistochemical analysis of paraffin-embedded Human breast cancer. Antibody was diluted at 1:100 (4°, overnight). High-pressure and temperature Tris-EDTA, pH 8.0 was used for antigen retrieval. Negative control (right) obtained from antibody was pre-absorbed by immunogen peptide.