

Goat Anti-MDA5 / IFIH1 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1660a**Specification**

Goat Anti-MDA5 / IFIH1 Antibody - Product Information

Application	WB, IHC, FC, Pep-ELISA
Primary Accession	Q9BYX4
Other Accession	NP_071451 , 64135
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	116689

Goat Anti-MDA5 / IFIH1 Antibody - Additional Information**Gene ID** 64135**Other Names**

Interferon-induced helicase C domain-containing protein 1, 3.6.4.13, Clinically amyopathic dermatomyositis autoantigen 140 kDa, CADM-140 autoantigen, Helicase with 2 CARD domains, Helicard, Interferon-induced with helicase C domain protein 1, Melanoma differentiation-associated protein 5, MDA-5, Murabutide down-regulated protein, RIG-I-like receptor 2, RLR-2, RNA helicase-DEAD box protein 116, IFIH1, MDA5, RH116

Dilution

WB~~1:1000
IHC~~1:100~500
FC~~1:10~50
Pep-ELISA~~N/A

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-MDA5 / IFIH1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-MDA5 / IFIH1 Antibody - Protein Information

Name IFIH1 ([HGNC:18873](#))

Function

Innate immune receptor which acts as a cytoplasmic sensor of viral nucleic acids and plays a major role in sensing viral infection and in the activation of a cascade of antiviral responses including the induction of type I interferons and pro-inflammatory cytokines (PubMed:28594402, PubMed:32169843, PubMed:33727702). Its ligands include mRNA lacking 2'-O-methylation at their 5' cap and long-dsRNA (>1 kb in length) (PubMed:22160685). Upon ligand binding it associates with mitochondria antiviral signaling protein (MAVS/IPS1) which activates the IKK-related kinases: TBK1 and IKKε which phosphorylate interferon regulatory factors: IRF3 and IRF7 which in turn activate transcription of antiviral immunological genes, including interferons (IFNs); IFN-α and IFN-β. Responsible for detecting the Picornaviridae family members such as encephalomyocarditis virus (EMCV), mengo encephalomyocarditis virus (ENMG), and rhinovirus (PubMed:28606988). Detects coronavirus SARS-CoV-2 (PubMed:33440148, PubMed:33514628). Can also detect other viruses such as dengue virus (DENV), west Nile virus (WNV), and reovirus. Also involved in antiviral signaling in response to viruses containing a dsDNA genome, such as vaccinia virus. Plays an important role in amplifying innate immune signaling through recognition of RNA metabolites that are produced during virus infection by ribonuclease L (RNase L). May play an important role in enhancing natural killer cell function and may be involved in growth inhibition and apoptosis in several tumor cell lines.

Cellular Location

Cytoplasm. Nucleus. Mitochondrion. Note=Upon viral RNA stimulation and ISGylation, translocates from cytosol to mitochondrion. May be found in the nucleus, during apoptosis

Tissue Location

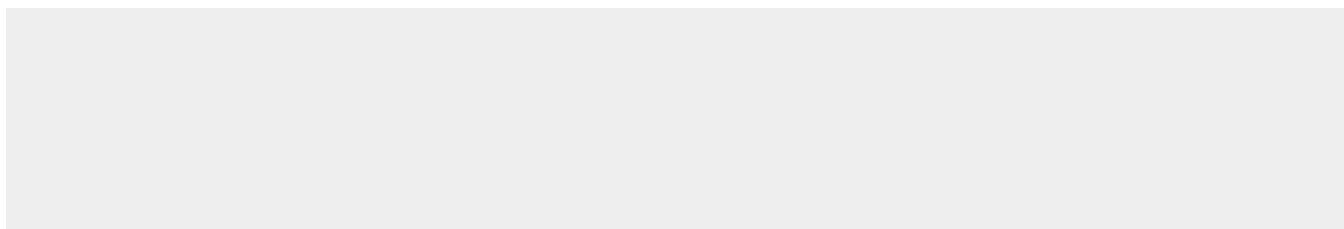
Widely expressed, at a low level. Expression is detected at slightly highest levels in placenta, pancreas and spleen and at barely levels in detectable brain, testis and lung

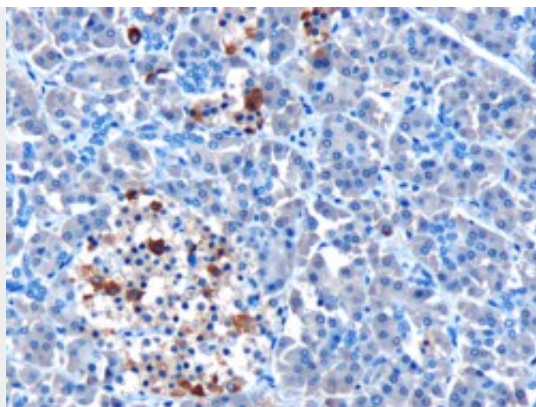
Goat Anti-MDA5 / IFIH1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

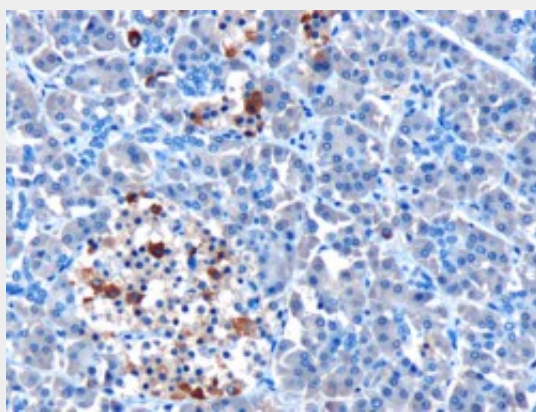
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Goat Anti-MDA5 / IFIH1 Antibody - Images

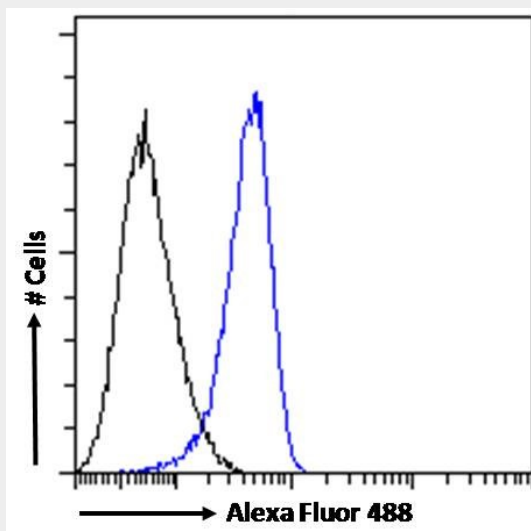




AF1660a (10 µg/ml) staining of paraffin embedded Human Pancreas. Microwaved antigen retrieval with Tris/EDTA buffer pH9, HRP-staining.



EB05965 (10 µg/ml) staining of paraffin embedded Human Pancreas. Microwaved antigen retrieval with Tris/EDTA buffer pH9, HRP-staining.



EB05965 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 secondary antibody (1 µg/ml). IgG control: Unimmunized goat IgG (black line) for

Goat Anti-MDA5 / IFIH1 Antibody - 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 (IFNB) and a protein kinase C-activating compound, mezerein (MEZ). Irreversible reprogramming of melanomas can be achieved by treatment with both these agents; treatment with either agent alone only achieves reversible differentiation.

Goat Anti-MDA5 / IFIH1 Antibody - References

Association of IFIH1 and other autoimmunity risk alleles with selective IgA deficiency. Ferreira RC, et al. Nat Genet, 2010 Sep. PMID 20694011.

Carriers of Rare Missense Variants in IFIH1 Are Protected from Psoriasis. Li Y, et al. J Invest Dermatol, 2010 Jul 29. PMID 20668468.

Investigation of type 1 diabetes and coeliac disease susceptibility loci for association with juvenile idiopathic arthritis. Hinks A, et al. Ann Rheum Dis, 2010 Jul 20. PMID 20647273.

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.

Polymorphisms of innate pattern recognition receptors, response to interferon-beta and development of neutralizing antibodies in multiple sclerosis patients. Enevold C, et al. Mult Scler, 2010 Aug. PMID 20595247.