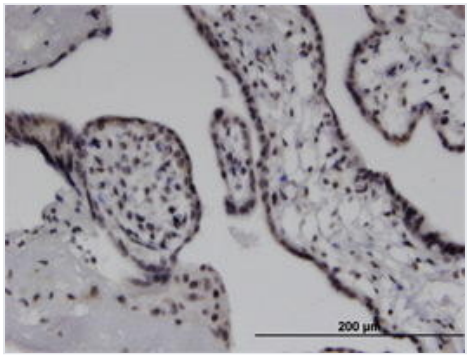
MDA5 Antibody – Mouse Monoclonal

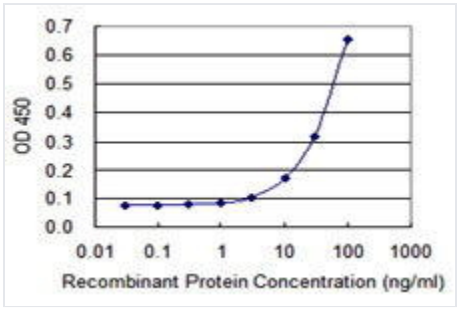
PRODUCT OVERVIEW

Product Name	MDA5, Monoclonal Antibody
Full Product Name	MDA5 (Melanoma Differentiation-associated Protein 5, MDA-5, Interferon-induced Helicase C Domain-containing Protein 1, Clinically Amyopathic Dermatomyositis Autoantigen 140kD, CADM-140 Autoantigen, Helicase with 2 CARD Domains, Helicard, Hlcd, IDDM19, Int
Product Gene Name	anti-MDA5 antibody
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Number	3F6
Host	Mouse
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight405.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes human MDA5.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight405 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Chromosome Location	Chromosome: 2; NC_000002.11 (163123589..163175218, complement). Location: 2q24
OMIM	606951
3D Structure	ModBase 3D Structure for Q9BYX4
Immunogen	Partial recombinant protein corresponding to aa928-1023 of human MDA5 (NM_022168; NP_071451.2) with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	HVNMTPEFKELYIVRENKALQKKCADYQINGEIICKCGQAWGTMMVHKGLDLPCLKIRNFVVVFKNNSTKKQYKKWVELPITFPNLDYSECCLFSD
Conjugate	MaxLight405
Product Categories/Family for anti-MDA5 antibody	Antibodies; Enzymes
Applications Tested/Suitable for anti-MDA5 antibody	FLISA, Immunohistochemistry (IHC)
Application Notes for anti-MDA5 antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-MDA5 antibody	MaxLight405 is a new Violet photostable dye conjugate comparable to Alexa Fluor 405, PacificBlue, Brilliant Violet 421 and offers better labeling efficiency, brighter imaging and increased immunodetection. Absorbance (400nm); Emission (423nm); Extinction Coefficient 32,000.
Other Notes	Small volumes of anti-MDA5 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for MDA5 purchase	MBS6190670 is an antibody targeting MDA5. Also known as MDA5 (Melanoma Differentiation-associated Protein 5, MDA-5, Interferon-induced Helicase C Domain-containing Protein 1, Clinically Amyopathic Dermatomyositis Autoantigen 140kD, CADM-140 Autoantigen, Helicase with 2 CARD Domains, Helicard, Hlcd, IDDM19, Int. Reactive in Human. Host: Mouse.



Testing Data of anti-MDA5 antibody
Immunoperoxidase on formalin-fixed paraffin-embedded human placenta in (3ug/ml).



Testing Data of anti-MDA5 antibody
Detection limit for is 3ng/ml as a capture antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MDA5. It may not necessarily be applicable to this product.

NCBI GI #	27886568
NCBI GeneID	64135
NCBI Accession #	NP_071451.2
UniProt Primary Accession #	Q9BYX4
UniProt Secondary Accession #	Q2NKL6; Q6DC96; Q86X56; Q96MX8; Q9H3G6
UniProt Related Accession #	Q9BYX4
GenBank Nucleotide #	NM_022168
NCBI Official Full Name	interferon-induced helicase C domain-containing protein 1
NCBI Official Synonym Full Names	interferon induced with helicase C domain 1
NCBI Official Symbol	IFIH1
NCBI Official Synonym Symbols	Hlcd; MDA5; MDA-5; RLR-2; IDDM19
UniProt Protein Name	Interferon-induced helicase C domain-containing protein 1
UniProt Synonym Protein Names	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
UniProt Gene Name	IFIH1
UniProt Synonym Gene Names	MDA5; RH116; CADM-140 autoantigen; Helicard; MDA-5; RLR-2
UniProt Entry Name	IFIH1_HUMAN

NCBI Protein Information	interferon-induced helicase C domain-containing protein 1; helicard; CADM-140 autoantigen; RIG-I-like receptor 2; helicase with 2 CARD domains; RNA helicase-DEAD box protein 116; murabutide down-regulated protein; DEAD/H (Asp-Glu-Ala-Asp/His) box polypept
NCBI Summary for MDA5	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-dependent type 19. [provided by RefSeq, Jul 2012]
UniProt Comments for MDA5	IFIH1: 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 proinflammatory cytokines. Its ligands include mRNA lacking 2'-O- methylation at their 5' cap and long-dsRNA (>1 kb in length). Upon ligand binding it associates with mitochondria antiviral signaling protein (MAVS/IPS1) which activates the IKK-related kinases: TBK1 and IKBKE which phosphorylate interferon regulatory factors: IRF3 and IRF7 which in turn activate transcription of antiviral immunological genes, including interferons (IFNs); IFN-alpha and IFN-beta. Responsible for detecting the Picornaviridae family members such as encephalomyocarditis virus (EMCV) and mengo encephalomyocarditis virus (ENMG). 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. Monomer in the absence of ligands and homodimerizes in the presence of dsRNA ligands. Can assemble into helical or linear polymeric filaments on long dsRNA. Interacts with MAVS/IPS1. 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. Interacts with PCBP2. Interacts with NLRC5. Interacts with PIAS2-beta. Interacts with DDX60. By interferon (IFN) and TNF. 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. Belongs to the helicase family. RLR subfamily. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Apoptosis; EC 3.6.4.13; Helicase Chromosomal Location of Human Ortholog: 2q24 Cellular Component: nucleus; cytosol Molecular Function: ribonucleoprotein binding; protein binding; single-stranded RNA binding; DNA binding; zinc ion binding; double-stranded RNA binding; helicase activity; ATP binding Biological Process: regulation of apoptosis; protein sumoylation; detection of virus; viral reproduction; response to virus; positive regulation of interferon-beta production; innate immune response; negative regulation of interferon type I production; positive regulation of interferon-alpha production Disease: Aicardi-goutieres Syndrome 7; Singleton-merten Syndrome 1
Research Articles on MDA5	**1.** our results establish a distinct role for IFIH1 in apoptosis, inflammation, and autoantibody production, and explain the molecular basis of these three risk alleles for SLE pathogenesis.
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