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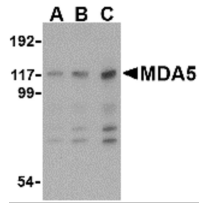
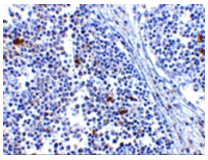
MDA5 Antibody

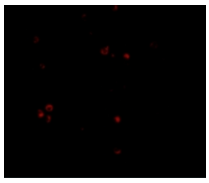
Cat. No.: 4039



MDA5 Antibody



Immunohistochemistry of MDA5 in human lymph node tissue with MDA5 antibody at 5 µg/mL.



Immunofluorescence of MDA5 in Human Lymph Node cells with MDA5 antibody at 20 µg/mL.

Specifications

HOST SPECIES:	Rabbit
SPECIES REACTIVITY:	Human, Mouse
IMMUNOGEN:	MDA5 antibody was raised against a 16 amino acid synthetic peptide from near the center of human MDA5. The immunogen is located within amino acids 330 - 380 of MDA5.
TESTED APPLICATIONS:	ELISA, IF, IHC-P, WB

APPLICATIONS:	MDA5 antibody can be used for detection of MDA5 by Western blot at 1 - 4 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL. Antibody validated: Western Blot in human samples; Immunohistochemistry in human samples and Immunofluorescence in human samples. All other applications and species not yet tested.
POSITIVE CONTROL:	1) Cat. No. 1224 - Daudi Cell Lysate
	2) Cat. No. 1369 - Human Lymph node Tissue Lysate
	3) Cat. No. 11-521 - Human Lymphoid Tissue Tissue Slide

Properties

PURIFICATION:	MDA5 Antibody is affinity chromatography purified via peptide column.
CLONALITY:	Polyclonal
ISOTYPE:	IgG
CONJUGATE:	Unconjugated
PHYSICAL STATE:	Liquid
BUFFER:	MDA5 Antibody is supplied in PBS containing 0.02% sodium azide.
CONCENTRATION:	1 mg/mL
STORAGE CONDITIONS:	MDA5 antibody can be stored at 4˚C for three months and -20˚C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Additional Info

OFFICIAL SYMBOL:	IFIH1
ALTERNATE NAMES:	MDA5 Antibody: Hlcd, MDA5, MDA-5, RLR-2, IDDM19, RH116, Interferon-induced helicase C domain-containing protein 1, Clinically amyopathic dermatomyositis autoantigen 140 kDa, CADM-140 autoantigen
ACCESSION NO.:	NP_071451
PROTEIN GI NO.:	27886568
GENE ID:	64135
USER NOTE:	Optimal dilutions for each application to be determined by the researcher.

Background and References

BACKGROUND:	MDA5 Antibody: The innate immune system detects viral infection by recognizing various viral components and triggers antiviral responses. Like the toll-like receptor 3 (TLR3), the melanoma differentiation-associated protein 5 (MDA5) recognizes double-stranded (ds) RNA, a molecular pattern associated with viral infection. MDA5, a member of the DEAD/DEAH-box RNA helicase family, consists of an amino-terminal caspase recruitment domain (CARD) and a carboxyl-terminal RNA helicase domain similar to that of the related protein RIG-1. When stimulated by dsRNA, MDA5 recruits the adaptor protein VISA and ultimately causes the activation of IRF-3 and NF-κB. MDA5 and RIG-1 recognize different types of dsRNA, with MDA5 recognizing poly (I:C). MDA5-null mice were highly susceptible to infection with picornaviruses, which possess such sequences, demonstrating the importance of MDA5 in innate immunity.
REFERENCES:	1) Akira S, Uematsu S, and Takeuchi O. Pathogen recognition and innate immunity. Cell 2006; 124:783-801.
	2) Hiscott J, Nguyen T-LA, Arguello M, et al. Manipulation of the nuclear factor-kappaB pathway and the innate immune response by viruses. Oncogene 2006; 25:6844-67.
	3) Kang D, Gopalrishnan RV, Lin L, et al. Expression analysis and genomic characterization of human melanoma differentiation associated gene-5, mda-5: a novel type I interferon-responsive apoptosis-inducing gene. Oncogene 2004; 23:1789-800.
	4) Andrejeva J, Childs KS, Young DF, et al. The V proteins of the paramyxoviruses bind the IFN-inducible RNA helicase, mda-5, and inhibit its activation of the IFN-beta promoter. Proc. Natl. Acad. Sci. USA 2004; 101:17264-9.