

Datasheet for 600-401-CS6**MDA5 Antibody****Overview**

Description:	Anti-MDA5 (RABBIT) Antibody - 600-401-CS6
Item No.:	600-401-CS6
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse
Host Species:	Rabbit

Product Details

Background:	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.
Synonyms:	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
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	IFIH1
Reactivity:	Human, Mouse

Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-MDA5 antibody was prepared from whole rabbit serum produced by repeated immunizations with a 16 amino acid synthetic peptide from near the C-terminus of human MDA5.
Purity/Specificity:	Anti-MDA5 Antibody was affinity purified from monospecific antiserum by immunoaffinity chromatography. Cross reactivity with MDA5 from other sources has not been determined.
Relevant Links:	• UniProtKB - Q9BYX4 • GeneID - 64135 • NCBI - NP_071451

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-MDA5 Antibody has been tested for use in ELISA, Western Blotting, Immunohistochemistry and Immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band at approximately 117 kDa in Western Blots of specific cell lysates and tissues.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:40,000
IF:	20 µg/mL
IHC:	5 µg/mL
WB:	1-4 µg/mL

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

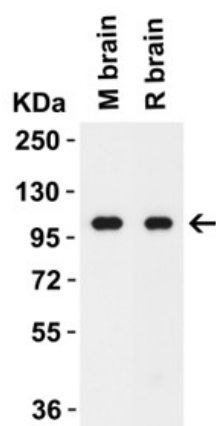
Shipping & Handling

Shipping Condition:	Dry Ice
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Storage Condition: Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

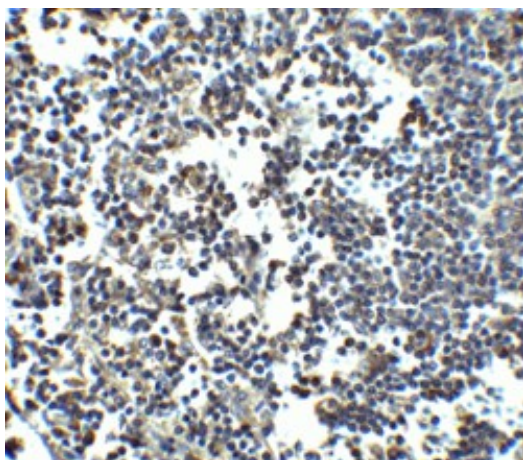
Expiration: Expiration date is one (1) year from date of receipt.

Images



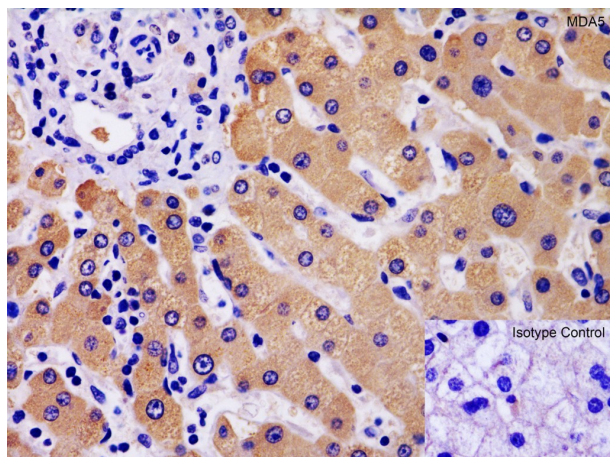
Western Blot

WB Validation. Loading: 15 µg of mouse and rat brain lysate
 Antibodies: MDA5, µg/mL, 1 h incubation at RT in 5%
 NFDm/TBST. Secondary: Goat Anti-Rabbit IgG HRP conjugate
 at 1:10000 dilution.



Immunohistochemistry

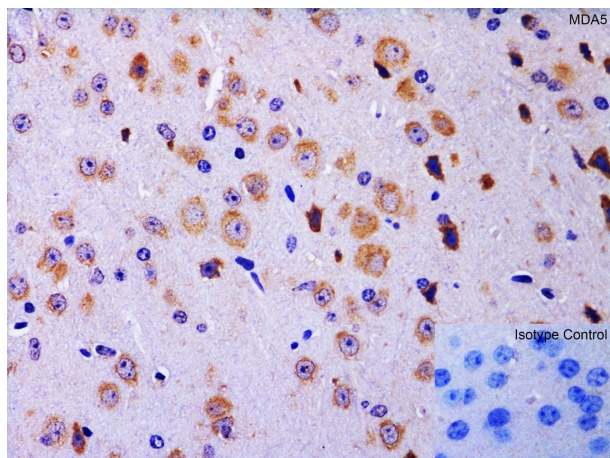
Immunohistochemistry Validation of MDA5.
 Immunohistochemical analysis of paraffin-embedded human
 lymph node tissue using anti-MDA5 antibody at 2.5 µg/ml.
 Tissue was fixed with formaldehyde and blocked with 10%
 serum for 1 h at RT; antigen retrieval was by heat mediation
 with a citrate buffer (pH6). Samples were incubated with
 primary antibody overnight at 4°C. A goat anti-rabbit IgG
 H&L (HRP) at 1/250 was used as secondary. Counter stained
 with Hematoxylin.



Immunohistochemistry

Immunohistochemistry Validation of MDA5.

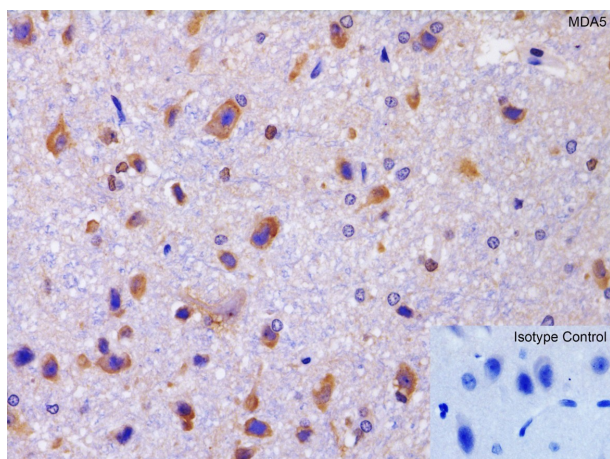
Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-MDA5 antibody at 2 µg/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Immunohistochemistry

Immunohistochemistry Validation of MDA5.

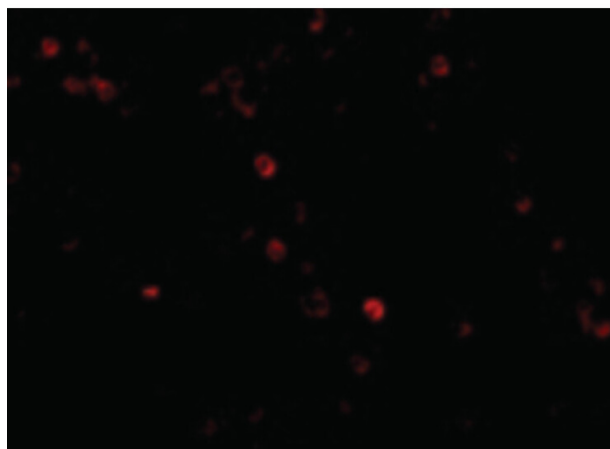
Immunohistochemical analysis of paraffin-embedded mouse brain tissue using anti-MDA5 antibody at 2 µg/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



Immunohistochemistry

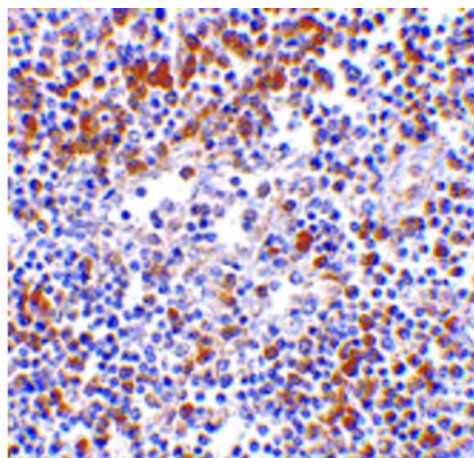
Immunohistochemistry Validation of MDA5.

Immunohistochemical analysis of paraffin-embedded rat brain tissue using anti-MDA5 antibody at 2 µg/ml. Tissue was fixed with formaldehyde and blocked with 10% serum for 1 h at RT; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody overnight at 4°C. A goat anti-rabbit IgG H&L (HRP) at 1/250 was used as secondary. Counter stained with Hematoxylin.



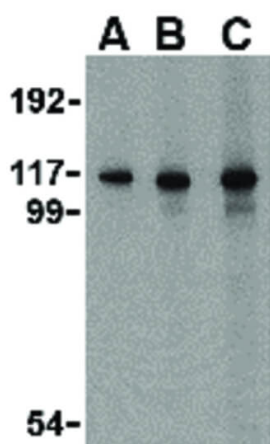
Immunofluorescence Microscopy

Immunofluorescence Microscopy of MDA5 antibody.
 Tissue: Human Lymph Node cells. Fixation: 0.5% PFA.
 Antigen retrieval: not required. Primary antibody: MDA5 antibody at 20 µg/mL for 1 h at RT. Secondary antibody: Fluorescein rabbit secondary antibody at 1:10,000 for 45 min at RT. Staining: MDA5 as red fluorescent signal.



Immunohistochemistry

Immunohistochemistry of MDA5 antibody. Tissue: Human lymph node tissue. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: MDA5 antibody at 5 µg/mL for 1 h at RT. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Localization: MDA5 is nuclear and occasionally cytoplasmic. Staining: MDA5 as precipitated red signal with hematoxylin purple nuclear counterstain.



Western Blot

Western Blot of MDA5 antibody. Lane A: Daudi cell lysate at 1 µg/mL. Lane B: Daudi cell lysate at 2 µg/mL. Lane C: Daudi cell lysate at 4 µg/mL. Load: 35 µg per lane. Secondary antibody: Peroxidase rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 116.6 kDa, ~117 kDa for MDA5.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.