

MDA5 (IN) antibody (pAb)

Rabbit Anti-Human/Mouse MDA5 (IN)

Instruction Manual

Catalog Number	PK-AB718-4039
Synonyms	MDA5 Antibody: Melanoma differentiation-associated protein 5, Interferon-induced with helicase C domain protein 1, IFIH1
Description	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- κ B. 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.
Quantity	100 μ g
Source / Host	Rabbit
Immunogen	MDA5 antibody was raised in rabbits against a 16 amino acid peptide from near the center of human MDA5.
Purification Method	Affinity chromatography purified via peptide column.
Clone / IgG Subtype	Polyclonal antibody
Species Reactivity	Human, Mouse
Specificity	
Formulation	Antibody is supplied in PBS containing 0.02% sodium azide.
Reconstitution	During shipment, small volumes of antibody will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 μ l or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.
Storage & Stability	Antibody can be stored at 4°C for three months and at -20°C 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.
Applications	E, WB, IHC, IF INote: Antibody might be suitable for other applications not tested so far. Optimal concentrations for each application have to be determined individually. MDA5 antibody can be used for detection of MDA5 by Western blot at 1 - 4 μ g/mL. Antibody can also be used for immunohistochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.
Images	Available upon request.
References	Akira S, Uematsu S, and Takeuchi O. Pathogen recognition and innate immunity. <i>Cell</i> 2006; 124:783-801. Hiscott J, Nguyen T-LA, Arguello M, et al. Manipulation of the nuclear factor- κ B pathway and the innate immune response by viruses. <i>Oncogene</i> 2006; 25:6844-67. 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. <i>Oncogene</i> 2004; 23:1789-800. 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. <i>Proc. Natl. Acad. Sci. USA</i> 2004; 101:17264-9.
Images	Available upon request.
Related Products	Cat.No. PK-AB718-4039P; MDA5 Peptide Cat.No. PK-AB718-1224; Daudi Cell Lysate

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