Cardif (human) polyclonal antibody (AT107)

RIG-I (retinoic acid-inducible gene I; Ddx58) and Mda5 (melanoma differentiation-associated gene 5, also known as Ifih1 or Helicard) are proteins that sense viral replication intermediates, such as double-stranded RNA and triggers the host antiviral programs. These molecules signal the downstream activation of NF-κB and IFN regulatory factor (IRF) -3, which coordinately regulate the expression of type-I interferons. Cardif (also called VISA/IPS-1/MAVS) is a CARD (caspase activation and recruitment domain)-containing adaptor protein that interacts with the CARD domain of RIG-I and Mda5, leading to the activation of NF-κB and IRF3. Cardif is located to the mitochondrial outer membrane. Removal of the mitochondrial-targeting domain of cardif abolishes its ability to induce IFNs. Cardif is cleaved and inactivated by NS3-4A, a serine protease from hepatitis C virus known to block interferon-β production.

This antibody is covered by our Worry-Free Guarantee.

Citations: 40 View Online »

Ordering Information

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ALX-210-929-C100	100µg

Manuals, SDS & CofA

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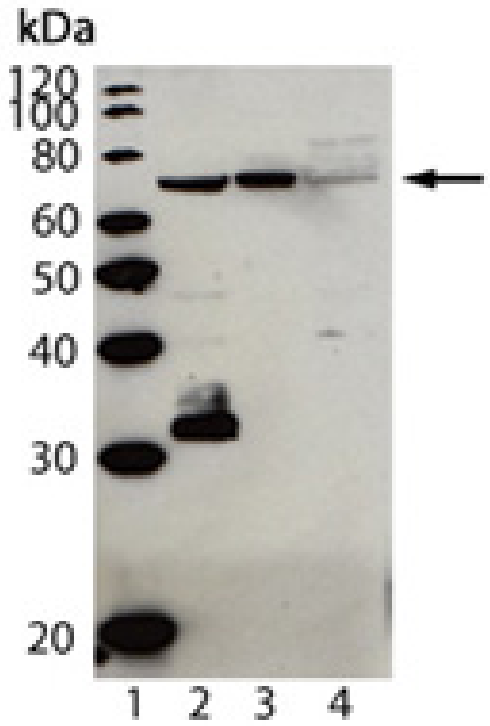
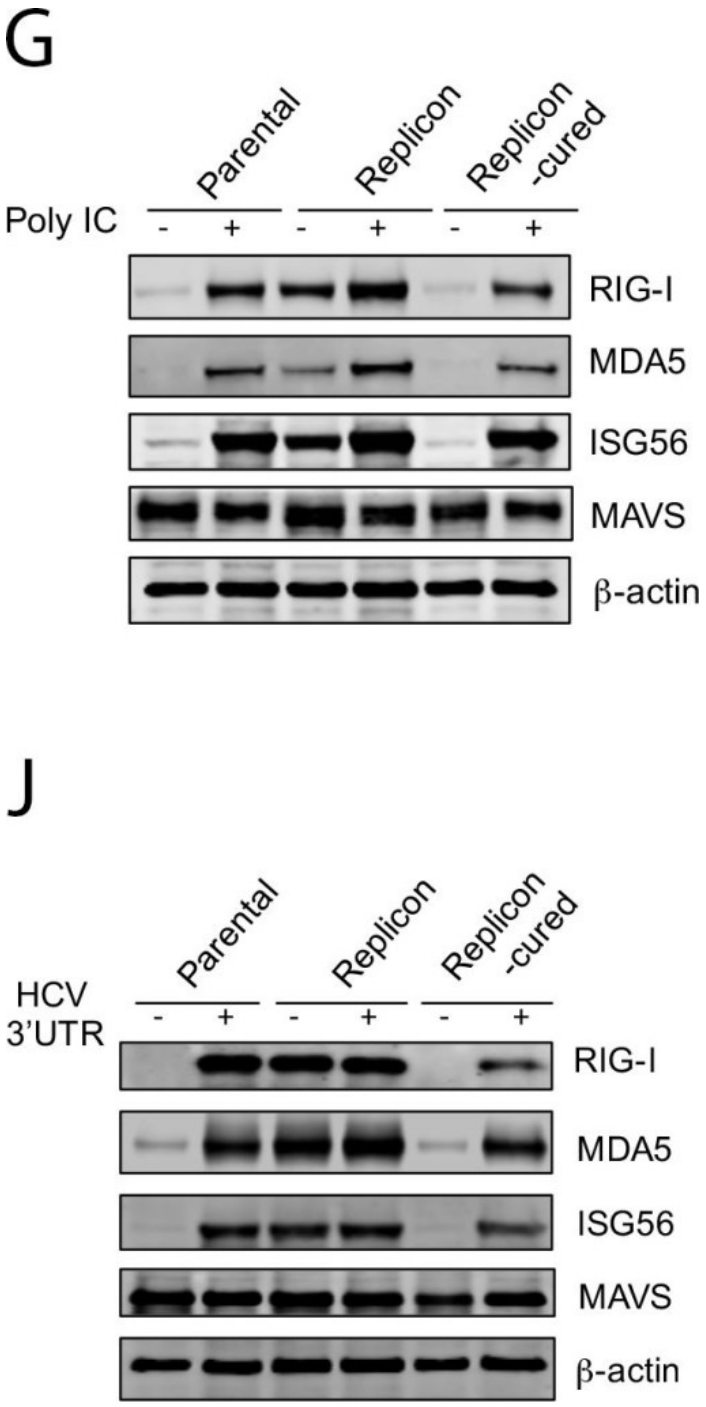
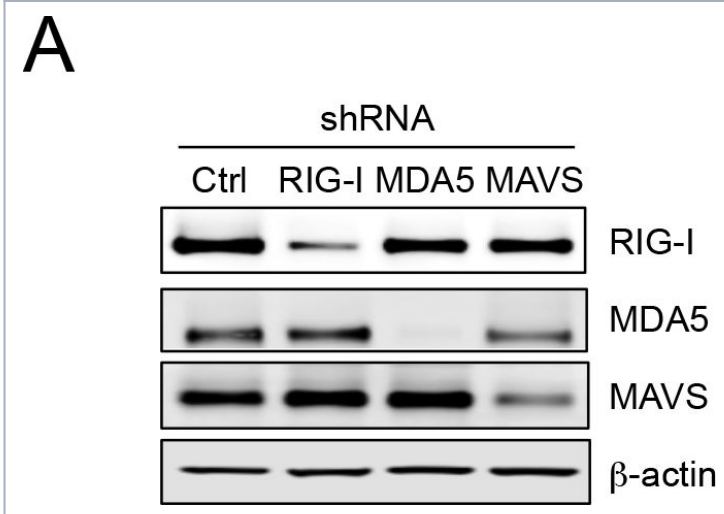


Western blot analysis of Cardif (human), pAb (AT107) (Prod. No. ALX-210-929): Lane 1: MW marker; Lane 2: HepG2; Lane 3: PALA; and Lane 4: HeLa. Additional bands observed probably represent isoforms or cleaved products of Cardif.



HEV does not target MAVS.(A) Confocal images showing MAVS and viral antigens in HepG2 cells infected with either HEV (top) or HAV (bottom). Cells were stained 5 days after infection with a rabbit anti-MAVS, chimpanzee 1313 serum (HEV), or a murine monoclonal antibody K24F2 (HAV). DAPI was used to stain the nuclei. Scale bar: 10 μm. (B) Confocal images showing the mitochondrial localization of MAVS in HepG2 cells with or without HEV replicon. MAVS was stained with a rabbit antibody against MAVS (green). Mitochondria was visualized with MitoTracker (red). Nuclei were stained with DAPI. Scale bar: 10 μm. (C) HepG2 cells with or without the HEV replicon were transfected with a MAVS-expressing plasmid along with a HAV 3ABC-expressing plasmid or an empty vector. The endogenous (closed arrowheads) and overexpressed MAVS (open arrowheads) were detected with a rabbit anti-MAVS antibody. Note that co-



Signaling pathways involved in HEV-induced IFN response.Immunoblots of RIG-I, MDA5, MAVS and β-actin in HepG2 cells expressing gene-specific shRNA, or GFP (Ctrl). (B-C) IFN-β promoter activity in HepG2 cells with different gene knockdown following Sendai virus (SeV) infection (B) or poly IC transfection (C). Cells were transfected with IFN-β-Luc and TK-RLuc (for normalization of transfection efficiency) 20 h prior to SeV infection or poly IC transfection. Cells were lysed and luciferase activity was determined 20 h after SeV infection or 12 h after poly IC transfection. Data are presented as fold changes relative to non-treated cells. Shown are representative results from two independent experiments each performed in triplicate. (D-F) Effect of RIG-I, MDA5 or MAVS knockdown on HEV replication and host IFN responses. Control and shRNA-expressing HepG2 cells were inoculated with HEV (1000 GE/cell). IFN-λ mRNA expression (D), HEV RNA abundance (E), and HEV-positive foci (F) were determined at 5 days after infection. The results show the mean ± SEM of 2 independent experiments performed in duplicate each. * P<0.05; ** P<0.01. (G) Immunoblots of IRF-3, IRF-7 and β-actin in HepG2 cells transduced with lentiviruses expressing GFP (Ctrl) or gene-specific shRNA. (H-J) Effect of IRF-3 or IRF-7 knockdown on HEV replication and IFN responses. Control and shRNA-expressing cells were inoculated with HEV (1,000 GE/cell). IFN-λ mRNA expression (H), HEV RNA abundance (I), and HEV-positive foci (J) in different cells were determined after 5 days. The results show the mean ± SEM of 2 independent experiments each performed in duplicate wells. * P<0.05; ** P<0.01. Scale bar (upper panel in F), 100 μm.

Handling & Storage

Use/Stability	Stable for at least 1 year after receipt when stored at -20°C.
Handling	Avoid freeze/thaw cycles.
Short Term Storage	+4°C
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	CARD adapter inducing interferon-β, IPS-1, Interferon-β promoter stimulator protein 1, MAVS, Mitochondrial antiviral signalling protein, VISA, Virus-induced signalling adapter
Application	ICC, IP, WB
Application Notes	Detects a band of ~65kDa by Western blot.
Formulation	Liquid. In PBS containing 0.02% sodium azide.
Host	Rabbit
Immunogen	Recombinant human Cardif (CARD adapter inducing interferon-β) (aa 160-450).
Purity Detail	Protein A-affinity purified.
Recommendation Dilutions/Conditions	Immunocytochemistry (1:500)Immunoprecipitation (1:100)Western Blot (1:2,000)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Source	Purified from rabbit serum.
Species Reactivity	Human

UniProt ID Q7Z434

Worry-free Guarantee **This antibody is covered by our Worry-Free Guarantee .**

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