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KD-Validated Anti-IFIH1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1058

Specification

KD-Validated Anti-IFIH1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, ICC**
Primary Accession	Q9BYX4
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 117 kDa, observed, 140 kDa KDa**
Gene Name	**IFIH1**
Aliases	**IFIH1; Interferon Induced With Helicase C Domain 1; MDA-5; MDA5; Helicard; IDDM19; Interferon-Induced Helicase C Domain-Containing Protein 1; Clinically Amyopathic Dermatomyositis Autoantigen 140 KDa; Melanoma Differentiation-Associated Protein 5; Melanoma Differentiation-Associated Gene 5; RNA Helicase-DEAD Box Protein 116; Murabutide Down-Regulated Protein; Helicase With 2 CARD Domains; RIG-I-Like Receptor; CADM-140 Autoantigen; RLR-2; Hlcd; Interferon-Induced With Helicase C Domain Protein 1; DEAD/H (Asp-Glu-Ala-Asp/His) Box Polypeptide; EC 3.6.4.13; SGMRT1; IMD95; RH116; AGS7; HLCD**
Immunogen	**A synthesized peptide derived from human MDA5**

KD-Validated Anti-IFIH1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**64135**

Other Names
Interferon-induced helicase C domain-containing protein 1, 3.6.4.13, 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, IFIH1 (HGNC:18873)

KD-Validated Anti-IFIH1 Rabbit Monoclonal Antibody - Protein Information

Name IFIH1 (HGNC:18873)

Function
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 pro-inflammatory cytokines (PubMed:28594402, PubMed:32169843, PubMed:33727702). Its ligands include mRNA lacking 2'-O-methylation at their 5' cap and long-dsRNA (>1 kb in length) (PubMed:22160685). 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), mengo encephalomyocarditis virus (ENMG), and rhinovirus (PubMed:28606988). Detects coronavirus SARS-CoV-2 (PubMed:33440148, PubMed:33514628). 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.

Cellular Location
Cytoplasm. Nucleus. Mitochondrion. Note=Upon viral RNA stimulation and ISGylation, translocates from cytosol to mitochondrion. May be found in the nucleus, during apoptosis

Tissue Location
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

KD-Validated Anti-IFIH1 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-IFIH1 Rabbit Monoclonal Antibody - Images

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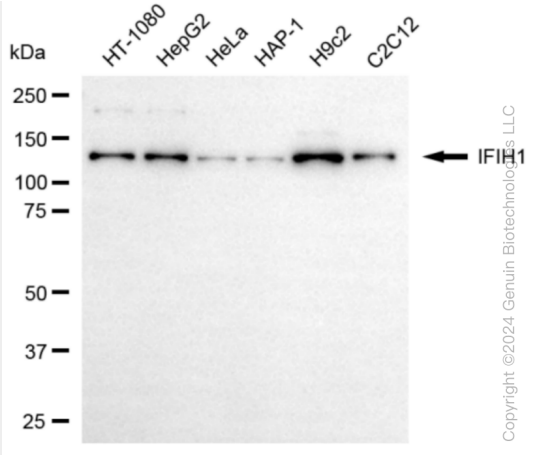
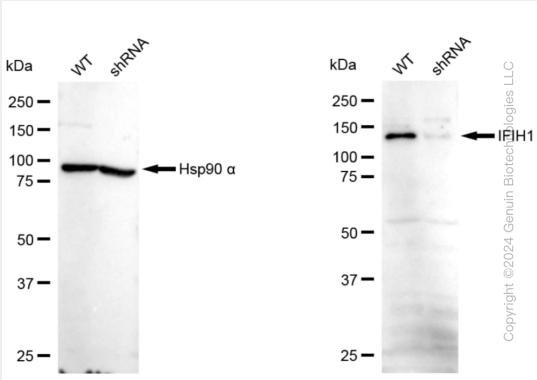
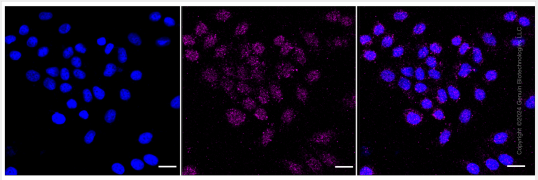


Western blotting analysis using anti-IFIH1 antibody (Cat#AGI1058). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-IFIH1 antibody (Cat#AGI1058, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-IFIH1 antibody (Cat#AGI1058). IFIH1 expression in wild type (WT) and IFIH1 shRNA knockdown (KD) HT-1080 cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-IFIH1 antibody (Cat#AGI1058, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Immunocytochemical staining of HepG2 cells with anti-IFIH1 antibody (Cat#AGI1058, 1:1,000). Nuclei were stained blue with DAPI; IFIH1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.