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MDA5 Antibody

Rabbit mAb
Catalog # AP91557

Product Information

Application	WB, IF, ICC
Primary Accession	Q9BYX4
Reactivity	Human
Clonality	Monoclonal
Other Names	Helicard; Hlcd; IDDM19; IFIH1; MDA-5; RH116; RIG I like receptor 2; RLR 2; RNA helicase DEAD box protein 116;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	116689

Additional Information

Dilution	WB 1:500~1:2000 ICC/IF 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human MDA5
Description	Function to promote message degradation by specific RNases. Seems to have growth suppressive properties. Involved in innate immune defense against viruses.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

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

Images

Image not found : 202311/AP91557-wb.jpg	Western blot analysis of MDA5 expression in THP1 cell lysate.

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