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IFIH1 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP5679a

Specification

IFIH1 Antibody (N-term) Blocking peptide - Product Information

Primary Accession	Q9BYX4
Other Accession	NP_071451.2

IFIH1 Antibody (N-term) Blocking peptide - Additional Information

Gene ID 64135

Other Names
Interferon-induced helicase C domain-containing protein 1, 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, MDA5, RH116

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

IFIH1 Antibody (N-term) Blocking peptide - 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:32169843, PubMed:33727702, PubMed:28594402). 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

IFIH1 Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

IFIH1 Antibody (N-term) Blocking peptide - Images

IFIH1 Antibody (N-term) Blocking peptide - Background

DEAD box proteins, characterized by the conserved motifAsp-Glu-Ala-Asp (DEAD), are putative RNA helicases. They areimplicated in a number of cellular processes involving alterationof RNA secondary structure such as translation initiation, nuclearand mitochondrial splicing, and ribosome and spliceosome assembly.Based on their distribution patterns, some members of this familyare believed to be involved in embryogenesis, spermatogenesis, andcellular growth and division. This gene encodes a DEAD box proteinthat is upregulated in response to treatment with beta-interferon(IFNB) and a protein kinase C-activating compound, mezerein (MEZ).Irreversible reprogramming of melanomas can be achieved bytreatment with both these agents; treatment with either agent aloneonly achieves reversible differentiation.

IFIH1 Antibody (N-term) Blocking peptide - References

Andrejeva, J., et al. Proc. Natl. Acad. Sci. U.S.A. 101(49):17264-17269(2004)Kang, D.C., et al. Oncogene 23(9):1789-1800(2004)Cocude, C., et al. J. Gen. Virol. 84 (PT 12), 3215-3225 (2003) Kovacsovics, M., et al. Curr. Biol. 12(10):838-843(2002)Kang, D.C., et al. Proc. Natl. Acad. Sci. U.S.A. 99(2):637-642(2002)