

Active Recombinant Full Length Human IFIH1 Protein, C-Flag-tagged

Cat. No. IFIH1-04HFL Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Full Length Human IFIH1 Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.
Species	Human
Source	Mammalian Cells
Description	IFIH1 encodes MDA5 which is an intracellular sensor of viral RNA that triggers the innate immune response. Sensing RNA length and secondary structure, MDA5 binds dsRNA oligonucleotides with a modified DExD/H-box helicase core and a C-terminal domain, thus leading to a proinflammatory response that includes interferons. It has been shown that Coronaviruses (CoVs) as well as various other virus families, are capable of evading the MDA5-dependent interferon response, thus impeding the activation of the innate immune response to infection. MDA5 has also been shown to play an important role in enhancing natural killer cell function in malaria infection. In addition to its protective role in antiviral responses, MDA5 has been implicated in autoimmune and autoinflammatory diseases such as type 1 diabetes, systemic lupus erythematosus, and Aicardi-Goutieres syndrome.
Form	25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.
Bio-activity	ELISA capture for autoantibodies
Molecular Mass	116.5 kDa

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AA Sequence

MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDTFLPAEVKEQIQRTVATSGNMQ
 AVELLLSTLEKGV WHLGWTRFVEALRRTGSPLAARYMNPETDLPSPSFENAHDE
 YLQLLNLLQPTLVDKLLVRDVLDCME EELLTIEDRNRIAAAENNGNESGVRELLKRI
 VQKENWFS AFLNVLRQTGNNELVQELTGSDCSESNAEIE NLSQVDGPQVEEQLLST
 TVQPNLEKEVWGMENNSSESSFADSSVSESDTSLAEGSVSCLDESLGHNSNM G
 SDSGTMGSDSDEENVAARASPEPELQLRPYQMEVAQPALEGKNIICLPTGSGKTRV
 AVYIAKDHLDKK KKASEPGKVIVLVNKVLLVEQLFRKEFQPFLLKKWYRVIGLSGDTQL
 KISFPEVVKSCDIIISTAQILENS LLNLENGEDAGVQLSDFSLIIDECHHTNKEAVYNNI
 MRHYLMQKLKNNRLKKENKPVIPQLGLTAS PGVGGATKQAKAEHILKLCANLD
 AFTIKTVKENLDQLKNQIQEPCKKFAIADATREDPFKEKLLEIMTR IQTYCQMSPMSD
 FGTQPYEQWAIQMEKKAAKEGNRKERVCAEHLRKYNEALQINDTIRMIDAYTHLET
 Y NEEKDKKFAVIEDDSDEGGDDEYCDGDEDEDDLKPLKLDDETDRFLMTLFFENNK
 MLKRLAENPEYENEK LTKLRNTIMEQYTRTEESARGIIFTKTRQSAYALSQWITENEK
 FAEVGVKAHHLIGAGHSSEFKPMTQNE QKEVISKFRGTGKINLLIATTVAEEGLDIKEC
 NIVIRYGLVTNEIAMVQARGRARADESTYVLVAHSGSGV IERETVNDFREKMMYKAI
 HCVQNMKPEEYAHKILELQMQSIMEKKMKTKRNIKHYKNNLSLITFLCKNC SVLAC
 SGEDIHVIEKMHVNMTPFEKELYIVRENKTLQKKCADYQINGEIICKCGQAWGTMM
 VHKGLDLP
 CLKIRNFVVFKNNSTKKQYKKWVELPITFPNLDYSECCLFSDDEDTRTRPLEQKLISE
 EDLAANDILDYKDDDDKV

Purity

> 80% as determined by SDS-PAGE and Coomassie blue staining.

Stability

Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

Storage

Store at -80 centigrade.

Concentration

>50 ug/mL as determined by microplate BCA method.

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Preparation	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Protein Families	RIG-I-like receptor signaling pathway
Full Length	Full L.

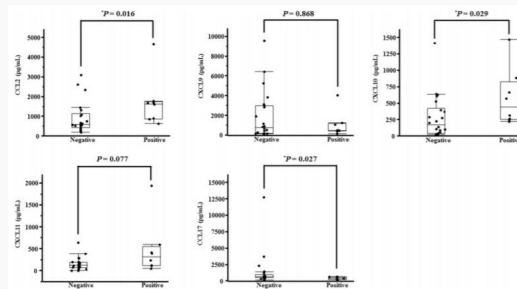
GENE INFORMATION

Gene Name	IFIH1 interferon induced with helicase C domain 1 [Homo sapiens (human)]
Official Symbol	IFIH1
Synonyms	AGS7; Hlcd; IDDM19; MDA-5; MDA5; RLR-2; SGMRT1
Gene ID	64135
mRNA Refseq	NM_022168.4
Protein Refseq	NP_071451.2
MIM	606951
UniProt ID	Q9BYX4

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Comparison of each of the chemokine levels (CCL2, CXCL11, CXCL9, CCL17, CXCL10) between anti-MDA5 antibody-positive and -negative patients. Anti-MDA5 antibody status was determined by ELISA using recombinant MDA5/IFIH1 antigen.



Coomassie blue staining of purified IFIH1 protein.