

Recombinant Human IFIH1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50448

Size: 10ug, 100ug

Protein Name: Interferon-induced helicase C domain-containing protein 1 (EC 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)

Synonym: IFIH1, MDA5, RH116

UniProt ID: Q9BYX4

UniProt Link: www.uniprot.org/uniprotkb/Q9BYX4/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1025 AA

Molecular Weight: 117 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKEQIQRTVATSGNMQAVELLSTLEK
GVWHLGWTRFVEALRRTGSPLAARYMNPETDLPSPSFENAHDEYLQLLNLLQPTLVDKLLVRDV
LDKCMEEELLTIEDRNRIAAAENNGNESGVRELLKRIVQKENWFS AFLNLVLRQTGNNELVQELTGSD
CSESN AEIENLSQVDGPQVEEQLLSTTVQPNLEKEVWGMENNSSSESSFADSSVVS ESDTSLAEGSV
SCLDESLGHNSNMGSDSGTMGSDSDEENVAARASPEPELQLRPYQMEVAQPALEGKNIIICLPTGS
GKTRVAVYIAKDHLDDKKKKASEPGKVIVLVNKVLLVEQLFRKEFQPFLKKWYRVIGLSGDTQLKISFPE
VVKSCDIIISTAQILENSLLNLENGEDAGVQLSDFSLIIDECHHTNKEAVYNNIMRHYLMQKLKNNRLK
KENKPVIPQLGLTASPGVGGATKQAKAEHILKLCANLDAFTIKTVKENLDQLKNQIQEPCKKFAIA
DATREDPFKEKLEIMTRIQTQCMSPMSDFGTQPYEQWAIQMEKKAKEGNRKERVCAEHLRKYN
EALQINDTIRMIDAYTHLET FYNEEKDKKFAVIEDDSDEGGDDEYCDGDEDEDDLKKPLKLD ETRFL
MTLFFENNKMLKRLAENPEYENEKLTCLRNTIMEQYTRTEESARGIIFTKTRQSAYALSQWITENEKF
AEVGVKAHHLIGAGHSSEFKPMTQNEQKEVISKFRTGKINLLIATTVAEEGLDIKECNIVIRYGLVTNEI
AMVQARGRARADESTYVLVAHSGSGVIEHETVNDFREKMMYKAIHCVQNMKPEEYAHKILELQM QS
IMEKKMKTKRNI AKHYKNNPSLITFLCKNCSVLACSGEDIHVIEKMHHVNMTPEFKELYIVRENKALQK



KCADYQINGEIICKCGQAWGTMMVHKGLDLPCLKIRNFVVVFKNNSTKKQYKKWVELPITFPNLDYS
ECCLFSDSD

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Interferon-induced helicase C domain-containing protein 1 (EC 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) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein 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 IKKε which phosphorylate interferon regulatory factors: IRF3 and IRF7 which in turn activate transcription of antiviral immunological genes, including interferons (IFNs); IFN-α and IFN-β. 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.

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

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.



Enlibio Wuhan Enlibio Biotech Co.,Ltd

- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.