

Recombinant Mouse IFIH1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51802

Size: 10ug, 100ug

Protein Name: Interferon-induced helicase C domain-containing protein 1 (EC 3.6.4.13) (Helicase with 2 CARD domains) (Helicard) (Interferon induced with helicase C domain protein 1) (Melanoma differentiation-associated protein 5) (MDA-5) (RIG-I-like receptor 2) (RLR-2)

Synonym: Ifih1

UniProt ID: Q8R5F7

UniProt Link: www.uniprot.org/uniprotkb/Q8R5F7/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1025 AA

Molecular Weight: 116 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVL D H L F L S A E T K E Q I L K K I N T C G N T S A A E L L L S T L E Q G Q
W P L G W T Q M F V E A L E H S G N P L A A R Y V K P T L T D L P S P S S E T A H D E C L H L L T L L Q P T L V D K L L I N D V L D T
C F E K G L L T V E D R N R I S A A G N S G N E S G V R E L L R R I V Q K E N W F S T F L D V L R Q T G N D A L F Q E L T G G G C P
E D N T D L A N S S H R D G P A A N E C L L P A V D E S S L E T E A W N V D D I L P E A S C T D S S V T T E S D T S L A E G S V S C F
D E S L G H N S N M G R D S G T M G S D S D E S V I Q T K R V S P E P E L Q L R P Y Q M E V A Q P A L D G K N I I C L P T G S G K T
R V A V Y I T K D H L D K K K Q A S E S G K V I V L V N K V M L A E Q L F R K E F N P Y L K K W Y R I I G L S G D T Q L K I S F P E V V K
S Y D V I I S T A Q I L E N S L L N L E S G D D D G V Q L S D F S L I I D E C H H T N K E A V Y N N I M R R Y L K Q K L R N N D L K K Q N
K P A I P L P Q I L G L T A S P G V G A A K K Q S E A E K H I L N I C A N L D A F T I K T V K E N L G Q L K H Q I K E P C K K F V I A D D T
R E N P F K E K L L E I M A S I Q T Y C Q K S P M S D F G T Q H Y E Q W A I Q M E K K A A K D G N R K D R V C A E H L R K Y N E A L
Q I N D T I R M I D A Y S H L E T F Y T D E K E K F A V L N D S D K S D D E A S S C N D Q L K G D V K K S L K L D E T D E F L M N L F
F D N K K M L K K L A E N P K Y E N E K L I K L R N T I L E Q F T R S E E S S R G I I F T K T R Q S T Y A L S Q W I M E N A K F A E V G V
K A H H L I G A G H S S E V K P M T Q T E Q K E V I S K F R T G E I N L L I A T T V A E E G L D I K E C N I V I R Y G L V T N E I A M V Q A
R G R A R A D E S T Y V L V T S S G S G V T E R E I V N D F R E K M M Y K A I N R V Q N M K P E E Y A H K I L E L Q V Q S I L E K K M
K V K R S I A K Q Y N D N P S L I T L L C K N C S M L V C S G E N I H V I E K M H H V N M T P E F K G L Y I V R E N K A L Q K K F A D Y
Q T N G E I I C K C G Q A W G T M M V H K G L D L P C L K I R N F V V N F K N N S P K K Q Y K K W V E L P I R F P D L D Y S E Y C L Y
S D E D

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) (Helicase with 2 CARD domains) (Helicard) (Interferon induced with helicase C domain protein 1) (Melanoma differentiation-associated protein 5) (MDA-5) (RIG-I-like receptor 2) (RLR-2) 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. Its ligands include mRNA lacking 2'-O-methylation at their 5' cap and long-dsRNA (>1 kb in length). 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 theiler's murine encephalomyelitis virus (TMEV). 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.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.