

Recombinant Human IFIT1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50449

Size: 10ug, 100ug

Protein Name: Antiviral innate immune response effector IFIT1 (IFIT-1) (Interferon-induced 56 kDa protein) (IFI-56K) (P56) (Interferon-induced protein with tetratricopeptide repeats 1)

Synonym: IFIT1, G10P1, IFI56, IFNAI1, ISG56

UniProt ID: P09914

UniProt Link: www.uniprot.org/uniprotkb/P09914/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 478 AA

Molecular Weight: 55 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSTNGDDHQVKDSLEQLRCHFTWELSIDDDMPDLENRVLDQIEFLDTKYSVGIHNLLAYVKHLKGQ
NEEALKSLKEAENLMQEEHDNQANVRSLVTWGNFAWMYYHMGRLAEAQTYLDKVENICKKLSNPF
RYRMECEIDCEEGWALLKCGGKNYERAKACFEKVLEVDPENPESSAGYAISAYRLDGFKLATKNH
KPFSLPLRQAVRLNPDNGYIKVLLALKLQDEGQEAEGEKYIEEALANMSSQTYVFRYAAKFYRRKG
SVDKALELLKKALQETPTSVLLHHQIGLCYKAQMIQIKEATKGQPRGQNREKLDKMIRSAIFHFESAVE
KKPTFEVAHLDLARMYIEAGNHRKAEENFQKLLCMKPVEETMQDIHFHYGRFQEFQKKSDVNAIIH
YLKAIKIEQASLTRDKSINSLKKLVLRKLRRKALDLESLSLLGFVYKLEGNMNEALEYYERALRLAADF
ENSVRQGP

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 Antiviral innate immune response effector IFIT1 (IFIT-1) (Interferon-induced 56 kDa protein) (IFI-56K) (P56) (Interferon-induced protein with tetratricopeptide repeats 1) 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: Plays a key role in the innate immune response as part of an interferon-dependent multiprotein complex, recognizing and sequestering viral RNAs that lack host-specific 2'-O-methylation at their 5' cap. By distinguishing these RNAs from host mRNAs, inhibits their translation by competing with the translation initiation factor eIF4E (PubMed:21642987, PubMed:27240734, PubMed:39009378, PubMed:23334420, PubMed:28251928, PubMed:36285486). Could also prevent viral replication through its interaction with DNA replication origin-binding protein E1 of several viruses. Causes the translocation of E1 from the nucleus to the cytoplasm and can also inhibit its helicase activity in vitro (PubMed:19008854, PubMed:21976647). Exhibits antiviral activity against many viruses from the Flaviviridae (West Nile virus, Dengue virus, hepatitis C virus), Coronaviridae (human 229E coronavirus, SARS-CoV-2 and SARS-CoV), Poxviridae (vaccinia virus) and Togaviridae (Sindbis virus) families (PubMed:19008854, PubMed:21976647, PubMed:28251928, PubMed:36285486).

Subcellular Localization: Cytoplasm .

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.