

Recombinant Human NMI Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50726

Size: 10ug, 100ug

Protein Name: N-myc-interactor (Nmi) (N-myc and STAT interactor)

Synonym: NMI

UniProt ID: Q13287

UniProt Link: www.uniprot.org/uniprotkb/Q13287/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 307 AA

Molecular Weight: 35 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MEADKDDTQQILKEHSPDEFIKDEQNKGLIDEITKKNIQLKKEIQKLETTELQEATKEFQIKEDIPETKMK
FLSVETPENDSQLSNISCSFQVSSKVPYEIQKGQALITFEKEEVAQNVVSMKHHVQIKDVNLEVTA
KPVPLNSGVRVFQVYVEVSKMKINVTEIPDTLREDQMRDKLELSFSKSRNGGGEVDVRVDYDRQSGSAV
ITFVEIGVADKILKKKEYPLYINQTCHRVTVSPYTEIHLKKYQIFSGTSKRTVLLTGMEGIQMDEEIVEDL
INIHFRQAKNGGGEVDVVKCSLGQPHIAYFEE

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 N-myc-interactor (Nmi) (N-myc and STAT interactor) 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: Acts as a signaling pathway regulator involved in innate immune system response (PubMed:26342464, PubMed:29038465, PubMed:29350881, PubMed:9989503). In response to interleukin 2/IL2 and interferon IFN-gamma/IFNG, interacts with signal transducer and activator of transcription/STAT which activate the transcription of downstream genes involved in a multitude of signals for development and homeostasis (PubMed:29377960, PubMed:9989503). Enhances the recruitment of CBP/p300 coactivators to STAT1 and STAT5, resulting in increased STAT1- and STAT5-dependent transcription (PubMed:9989503). In response to interferon IFN-alpha, associates in a complex with signaling pathway regulator IFI35 to regulate immune response; the complex formation prevents proteasome-mediated degradation of IFI35 (PubMed:10779520, PubMed:10950963). In complex with IFI35, inhibits virus-triggered type I IFN-beta production when ubiquitinated by ubiquitin-protein ligase TRIM21 (PubMed:26342464). In complex with IFI35, negatively regulates nuclear factor NF-kappa-B signaling by inhibiting the nuclear translocation, activation and transcription of NF-kappa-B subunit p65/RELA, resulting in the inhibition of endothelial cell proliferation, migration and re-endothelialization of injured arteries (PubMed:29350881). Negatively regulates virus-triggered type I interferon/IFN production by inducing proteasome-dependent degradation of IRF7, a transcriptional regulator of type I IFN, thereby interfering with cellular antiviral responses (By similarity). Beside its role as an intracellular signaling pathway regulator, also functions extracellularly as damage-associated molecular patterns (DAMPs) to promote inflammation, when actively released by macrophage to the extracellular space during cell injury or pathogen invasion (PubMed:29038465). Macrophage-secreted NMI activates NF-kappa-B signaling in adjacent macrophages through Toll-like receptor 4/TLR4 binding and activation, thereby inducing NF-kappa-B translocation from the cytoplasm into the nucleus which promotes the release of pro-inflammatory cytokines (PubMed:29038465).

Subcellular Localization: Cytoplasm . Nucleus . Secreted . Note=Cytoplasmic NMI localizes in punctate granular structures (PubMed:10950963, PubMed:9781816). Nuclear localization increased following IFN-alpha treatment (PubMed:10950963, PubMed:9781816). Extracellular following secretion by macrophage (PubMed:29038465).

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.