

Recombinant Human NAL12 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50694

Size: 10ug, 100ug

Protein Name: NACHT, LRR and PYD domains-containing protein 12 (Monarch-1) (PYRIN-containing APAF1-like protein 7) (Regulated by nitric oxide)

Synonym: NLRP12, NALP12, PYPAF7, RNO

UniProt ID: P59046

UniProt Link: www.uniprot.org/uniprotkb/P59046/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1061 AA

Molecular Weight: 120 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MLRTAGRDGLCRLSTYLEELEAVELKKFKLYLGTATELGEGKIPWGSMEKAGPLEMAQLLITHFGPE
EAWRLALSTFERINRKDLWERGQREDLVRDTPPGGPSSLGNQSTCLLEVSLVTPRKDPQETYRDYV
RRKFRLMEDRNARLGECVNLSHRYTRLLLVEKHSNPMQVQQQLLDTGRGHARTVGHQASPIKIETL
FEPDEERPEPPRTVVMQGAAGIGKSM LAHKVMLDWADGKLFQGRFDYLFYINCREMNQSATECSM
QDLIFSCWPEPSAPLQELIRVPERLLFIIDGFDELKPSFHDPQGPWCWCWEEKRPTTELLNSLIRKKLL
PELSLLITRPTALEKLHRLLEHPRHVEILGFSEAERKEYFYKYFHNAEQAGQVFNYVRDNEPLFTMC
FVPLVCWVVCTCLQQQLEGGGLLRQTSRTTTAVYMLYLLSLMQPKPGAPRLQPPPNQRGLCSLAA
DGLWNQKILFEEQDLRKHGLDGEDVSAFLNMNIFQKDINCERYYSFIHLSFQEFAAMYIILDEGEGG
AGPDQDVTRLLTEYAFSERSFLALTSRFLFGLLNEETRSHLEKSLCWKVSPHIKMDLLQWISKAQS
DGSTLQQGSLEFFSCLYEIQEEEFIQQALSHFQVIVVSNIASKMEHMOVSSFCLEKRCRSAQVLHLYGAT
YSADGEDRARCSAGAHTLLVQLPERTVLLDAYSEHLAAALCTNPNIELSLYRNALGSRGVKLLCQG
LRHPNCKLQNLRLKRCRISSACEDLSAALIANKNLTRMDLSGNGVGFGPMMLLCEGLRHPQCRLQ
MIQLRKQCLESACQEMASVLGTNPHLVELDTGNALEDLGLRLLCQGLRHPVCRLRTLWLKICRLT
AAACDELASTLSVNQSLRELDLSNELGDLGVLLLCEGLRHPTCKLQTLRLGICRLGSAACEGLSVVL
QANHNLRELDLSFNDLGDWGLWLLAEGHQHPACRLQKLWLDSCGLTAKACENLYFTLGINQTLTDL
YLTNNALGDTGVRLLCKRLSHPGCKLRVLWLFGM DLNKMTHSRLAALRVTKPYLDIGC

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 NACHT, LRR and PYD domains-containing protein 12 (Monarch-1) (PYRIN-containing APAF1-like protein 7) (Regulated by nitric oxide) 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 an essential role as a potent mitigator of inflammation (PubMed:30559449). Primarily expressed in dendritic cells and macrophages, inhibits both canonical and non-canonical NF-kappa-B and ERK activation pathways (PubMed:15489334, PubMed:17947705). Functions as a negative regulator of NOD2 by targeting it to degradation via the proteasome pathway (PubMed:30559449). In turn, promotes bacterial tolerance (PubMed:30559449). Also inhibits the RIGI-mediated immune signaling against RNA viruses by reducing the E3 ubiquitin ligase TRIM25-mediated 'Lys-63'-linked RIGI activation but enhancing the E3 ubiquitin ligase RNF125-mediated 'Lys-48'-linked RIGI degradation (PubMed:30902577). Also acts as a negative regulator of inflammatory response to mitigate obesity and obesity-associated diseases in adipose tissue (By similarity).

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.