

Recombinant Mouse NCKPL Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51776

Size: 10ug, 100ug

Protein Name: Nck-associated protein 1-like (Hematopoietic protein 1)

Synonym: Nckap1l, Hem1

UniProt ID: Q8K1X4

UniProt Link: www.uniprot.org/uniprotkb/Q8K1X4/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1134 AA

Molecular Weight: 129 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSLT SAYQLK LAEKL TILNDRGQGV LIRMYNIKKTCSDSKSKPPFLLEKSMESCLKYINKKFPNIDVRN
STQHLGPVHREKAEIIRFLTNYYSFVDVMEFRDHVYELLNTIDACQCHFDINLNFDFTRSYLDLIVTY
TSVILLLSRIEDRRILIGMYNCAHEMLHGHSDPSFARLGQMVLEYDHPLKKLTEEFGPHTKAVSGALL
SLHFLFVRRNQGAEQWRSQAQLLSLISSPPAMINPANSDTMACEYLSVEVMERWIIIGFLLCHGCLNSN
SQCQKLWKLCLEGSLYITLIREDVLQVHKVTEDLFSSSLKGYSKRVDIKESKEHAITNSGQFHCQRRQ
FLRTAVKELETVLNDEPGLLGPKALFAFMALSFIRDEVTWLVRHTENVTKTKTPEDYADSSIAELLFLL
EEIRALVRRHIKVIQQYHLQYLARFDVLVLSDIQNL SVCPEEESVIMSSFVSILSSLNLKQVDNEEKFD
FSGRLDWFRLQAYTSVSKAPLHLHENPDLAKVMNLIIFHSQMLDSVEKMLVETSDLSTFCFHLRTFE
KMFATTLEPTMLRYTIAFPLICAHFVHCVHEMCPEEYPHLKNHGLHHCNSFLEDLAKQTSNCVLEIC
AEQRNLNEQLLPKHCATTISKAKNKKSMKQRQAPRKGEPERDKPGAESHKRNRSLVTNMDKLHLNL
TELALAMNHVHSFSVFEHTIFPSEYLSHLEARNRAIVTLAGYNATTQEILRPSELLAGVKAYISFIQS
LAQFLGADASRIVRNALLQQTQPLDSSGEQTVTTLYTNWYLESLLRQASSGAIVLSPAMQAFISLPRD
GEQNFSAEFFSDISEMRALAEILGPYGMKFLSENLMWHVTSQIVELKKLVENMDILVQIRSNFSKPE
LMA SLLPQLTGAENVLKRMTIIGVILSFRAMAQEG LQEVFSAHCPFLMGPIECLKEFVTPDTDIKVTLS
VFELACAAGVSCDIDPALVAAIANL KADNSSPEEEYKVACLLI FLAVSLPLLATDPSSFFSIEKDGYN
NIHCLTKAIIQVSAALFTLYNKNIETHLKEFLVASV SLLQLGQETDKLKTRNRESISLLMRLVVEESPFL
TLDMLESCFPYVLLRNAYREVSR AFYLNRLPASSH

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 Nck-associated protein 1-like (Hematopoietic protein 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: Essential hematopoietic-specific regulator of the actin cytoskeleton. Controls lymphocyte development, activation, proliferation and homeostasis, erythrocyte membrane stability, as well as phagocytosis and migration by neutrophils and macrophages (PubMed:19015308, PubMed:23424621). Component of the WAVE2 complex which signals downstream of RAC to stimulate F-actin polymerization (PubMed:23424621). Required for stabilization and/or translation of the WAVE2 complex proteins in hematopoietic cells (PubMed:19015308). Within the WAVE2 complex, enables the cortical actin network to restrain excessive degranulation and granule release by T-cells. Required for efficient T-lymphocyte and neutrophil migration (By similarity). Exhibits complex cycles of activation and inhibition to generate waves of propagating the assembly with actin. Also involved in mechanisms WAVE independent to regulate myosin and actin polymerization during neutrophil chemotaxis (By similarity). In T-cells, required for proper mechanistic target of rapamycin complex 2 (mTORC2)-dependent AKT phosphorylation, cell proliferation and cytokine secretion, including that of IL2 and TNF (By similarity).

Subcellular Localization: Membrane ; Single-pass membrane protein . Cytoplasm . Note=Localizes to the leading edge of polarized neutrophils.

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.