

Recombinant Human NCKPL Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50700

Size: 10ug, 100ug

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

Synonym: NCKAP1L, HEM1

UniProt ID: P55160

UniProt Link: www.uniprot.org/uniprotkb/P55160/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1127 AA

Molecular Weight: 128 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSLTSAYQHKLAEKLTILNDRGQGVLRMYNIKKTCSDPKSKPPFLLLEKSMEPSLKYINKKFPNIDVRN
STQHLGVPVHREKAEIIRFLTNYYSQSFVDVMEFRDHVYELLNTIDACQCHFDINLNFDFTRSYLDLIVTY
TSVILLLSRIEDRRILIGMYNCAHEMLHGHGDPSFARLGQMVLEYDHPLKKLTEEFGPHTKAVSGALL
SLHFLFVRRNQGAEQWRSACLISNPPAMINPANSDTMACEYLSVEVMERWIIIGFLLCHGCLNSN
SQCQKLWKLCLQGSLEYITLIREDLVQVHKVTEDLFSSLKGYGKRVADIKESKEHVIANSGQFHCQRR
QFLRMAVKELETVLADEPGLLGPKALFAFMALSFIRDEVTWLVVRHTENVTKTKTPEDYADSSIAELLF
LLEGIRSLVRRHIKVIQQYHLQYLARFDALVLSDIQNLSVCPEEESIIMSSFVSILSSLNLKQVDNGEKF
EFSGRLRDWFRQLQAYTSVAKAPLHLHENPD LAKVMNLIVFHSRMLDSVEKLLVETSDLSTFCFHLRIF
EKMFMAMTLEESAMLRYAIAFPLICAHFVHCTHEMCPEEYPHLKNHGLHHCNSFLEELAKQTSNCVLEI
CAEQRNLSEQLLPKHCATTISKAKNKKTRKQRQTPRKGEPPERDKPGAESHRKNRSIVTNMDKLHLN
LTEALTMNHVYSFSVFEHTIFPSEYLSSHLEARNRAIVWLAGYNATTQEIVRPSELLAGVKAYIGFIQ
SLAQFLGADASRVIRNALLQQQTQPLDSCGEQTITTLTYTNWYLESLLRQASSGTIILSPAMQAFVSLPR
EGEQNFSAEEFSDISEMRALAEELGPYGMKFLSENLMWHVTSQIVELKKLVVENMDILVQIRSNFSKP
DLMASLLPQLTGAENVLKRMTIIGVILSFRAMAQEGLEVFSSHCPFLMGPIECLKEFVTPDPTDIKVT
SIFELASAAGVGCDIDPALVAAIANLKADTSSPEEEYKVACLLIFLAVSLPLLATDPSSFYSIEKDGYN
NNIHCLTKAIIQVSAALFTLYNKNIEHLKEFLVVASVLLQLGQETDKLKTRNRESISLLMRLVVEESS
FLTLDMLESCFPYVLLRNAYREVSRAFHNL

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) (Membrane-associated protein HEM-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 (Probable). Controls lymphocyte development, activation, proliferation and homeostasis, erythrocyte membrane stability, as well as phagocytosis and migration by neutrophils and macrophages (PubMed:16417406, PubMed:17696648). Component of the WAVE2 complex which signals downstream of RAC to stimulate F-actin polymerization. Required for stabilization and/or translation of the WAVE2 complex proteins in hematopoietic cells (By similarity). Within the WAVE2 complex, enables the cortical actin network to restrain excessive degranulation and granule release by T-cells (PubMed:32647003). Required for efficient T-lymphocyte and neutrophil migration (PubMed:32647003). Exhibits complex cycles of activation and inhibition to generate waves of propagating the assembly with actin (PubMed:16417406). Also involved in mechanisms WAVE-independent to regulate myosin and actin polymerization during neutrophil chemotaxis (PubMed:17696648). 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 (PubMed:32647003).

Subcellular Localization: Cell membrane ; Single-pass membrane protein ; Cytoplasmic side . 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.