

Recombinant Human RN128 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50850

Size: 10ug, 100ug

Protein Name: E3 ubiquitin-protein ligase RNF128 (EC 2.3.2.27) (Gene related to anergy in lymphocytes protein) (GRAIL) (RING finger protein 128) (RING-type E3 ubiquitin transferase RNF128)

Synonym: RNF128

UniProt ID: Q8TEB7

UniProt Link: www.uniprot.org/uniprotkb/Q8TEB7/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 428 AA

Molecular Weight: 47 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGPPPGAGVSCRGGCGFSRLLAWCFLALSPQAPGSRGAEAVWTAYLNVSWRVPHTGVNRTVWE
LSEEGVYGQDSPLEPVAGVLVPPDGPALNACNPHTNFTVPTVWGSTVQVSWLALIQRGGGCTFA
DKIHLAYERGASGAVIFNFPGTRNEVIPMSHPGAVDIVAIMIGNLKGTKILQSIQRGIQVTMVIEVGKKH
GPWVNHYSIFFVSVSFFIITAATVGYFIFY SARRLRNARAQSRKQRQLKADAKKAIGRLQLRTLKQGD
KEIGPDGDSCAVCIELYKPNDLVRILTCNHIFHKTCVDPWLLHRTCPMCKCDILKALGIEVDVEDGSV
SLQVPVSNEISNSASSHEEDNRSETASSGYASVQGTDEPPLEEHVQSTNESLQLVNHEANSVAVDVI
PHVDNPTFEEDETPNQETAVREIKS

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 E3 ubiquitin-protein ligase RNF128 (EC 2.3.2.27) (Gene related to anergy in lymphocytes protein) (GRAIL) (RING finger protein 128) (RING-type E3 ubiquitin transferase RNF128) 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: E3 ubiquitin-protein ligase that catalyzes 'Lys-27', 'Lys-48'- or 'Lys-63'-linked polyubiquitin chains formation and plays a role in different biological processes such as modulation of immune response, cytoskeletal dynamics or protein homeostasis. Inhibits IL2 and IL4 transcription, thereby playing an important role in the induction of the anergic phenotype, a long-term stable state of T-lymphocyte unresponsiveness to antigenic stimulation associated with the blockade of interleukin production (PubMed:12705856). Ubiquitinates ARPC5 with 'Lys-48' linkages and COR1A with 'Lys-63' linkages leading to their degradation, down-regulation of these cytoskeletal components results in impaired lamellipodium formation and reduced accumulation of F-actin at the immunological synapse (PubMed:22016387). Functions in the patterning of the dorsal ectoderm; sensitizes ectoderm to respond to neural-inducing signals. Plays a positive role in innate immune response by promoting 'Lys-63'-linked ubiquitination of TBK1 after RNA- or DNA-virus infection (PubMed:27776110). Regulates alveolar macrophage activation and neutrophil infiltration by interacting with TLR4, targeting it for degradation, and inhibiting NF-kappa-B activation, hence decreasing pro-inflammatory cytokines (PubMed:37344492). Negatively regulates the IL-3/STAT5 signaling pathway by facilitating 'Lys-27'-linked polyubiquitination of IL3RA leading to its degradation via lysosomal pathway (PubMed:38702781). Directly regulates the N-glycosylation process in the endoplasmic reticulum by targeting the glycosyl-transferase RPN1 for ubiquitination and degradation (PubMed:39567208). Other substrates targeted for degradation by RNF128 include transmembrane proteins CD40L, CD83 or the tetraspanin CD151 (PubMed:18713730, PubMed:19542455).

Subcellular Localization: Cytoplasm . Endomembrane system ; Single-pass membrane protein . Cytoplasm, cytoskeleton . Cytoplasm, perinuclear region . Note=Localized in an asymmetric perinuclear punctate manner. Localizes to the internal pool of the transferrin recycling endosomal pathway. Partially colocalized with the endoplasmic reticulum resident HSPA5, with Golgi resident STX5, and with the late endosomal GTPase RAB7A (By similarity).

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.