

Recombinant Mouse PELI1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51754

Size: 10ug, 100ug

Protein Name: E3 ubiquitin-protein ligase pellino homolog 1 (Pellino-1) (EC 2.3.2.27) (RING-type E3 ubiquitin transferase pellino homolog 1)

Synonym: Peli1

UniProt ID: Q8C669

UniProt Link: www.uniprot.org/uniprotkb/Q8C669/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 418 AA

Molecular Weight: 46 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MFSPDQENHPSKAPVKYGEIVLGYNGSLPNGDRGRRKSRFALFKRPKANGVKPSTVHIACTPQAA
KAISNKDQHSISYTLSTRAQTVVVEYTHDSNTDMFQIGRSTESPIDFVVTDTVPGSQSNSDTQSVQSTI
SRFACRIICERSPPFTARIYAAGFDSSKNIFLGEKAAKWKTSDGQMDGLTTNGVLVMHPRNGFTEDS
KPGIWREISVCGNVFSLRETRSAQQRGKMVEIETNQLQDGSIDLCLGATLLWRTAEGLSHTPTVKHL
EALRQEINAARPQCPVGFNTLAFPSMKRKDVVDEKQPWVYLNCGHVHGYHNWGNKEERDGDRE
CPMCRSVGPYPVPLWLGCEAGFYVDAGPPTHAFSPCGHVCSEKTTAYWSQIPLPHGTHTFHAACPF
CAHQLAGEQGYIRLIFQGPLD

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 pellino homolog 1 (Pellino-1) (EC 2.3.2.27) (RING-type E3 ubiquitin transferase pellino homolog 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: E3 ubiquitin ligase catalyzing the covalent attachment of ubiquitin moieties onto substrate proteins (PubMed:16951688, PubMed:29883609). Involved in the TLR and IL-1 signaling pathways via interaction with the complex containing IRAK kinases and TRAF6 (By similarity). Acts as a positive regulator of inflammatory response in microglia through activation of NF-kappa-B and MAP kinase (PubMed:31142803). Mediates 'Lys-63'-linked polyubiquitination of IRAK1 allowing subsequent NF-kappa-B activation (PubMed:16951688). Conjugates 'Lys-63'-linked ubiquitin chains to the adapter protein ASC/PYCARD, which in turn is crucial for NLRP3 inflammasome activation (PubMed:34706239). Mediates 'Lys-48'-linked polyubiquitination of RIPK3 leading to its subsequent proteasome-dependent degradation; preferentially recognizes and mediates the degradation of the 'Thr-182' phosphorylated form of RIPK3. Negatively regulates necroptosis by reducing RIPK3 expression. Mediates 'Lys-63'-linked ubiquitination of RIPK1. Following phosphorylation by ATM, catalyzes 'Lys-63'-linked ubiquitination of NBN, promoting DNA repair via homologous recombination. Negatively regulates activation of the metabolic mTORC1 signaling pathway by mediating 'Lys-63'-linked ubiquitination of mTORC1-inhibitory protein TSC1 and thereby promoting TSC1/TSC2 complex stability (PubMed:33215753).

Subcellular Localization: Chromosome . Note=Localizes to DNA double-strand breaks (DSBs) in response to DNA damage.

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.