

Recombinant Mouse K1C15 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51642

Size: 10ug, 100ug

Protein Name: Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)

Synonym: Krt15, Krt1-15

UniProt ID: Q61414

UniProt Link: www.uniprot.org/uniprotkb/Q61414/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 452 AA

Molecular Weight: 49 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MATTFLQTSSTFGGSSTRGASLRAGGGSFSGGGSLYGGGGSRSISASSARFVSSGAGGGFSGGMS
CGFGGGFSGGFGGGFSGGFGDFGGGDGGLLSGNEKVTMQNLNDRLASYLKVRALQANTELEV
KIRDWYQKQSPASPDYSHYFKTMEEIRDKILAAATIDNSRVVLEIDNARLAADDFRLKYENELTLRQ
GVEADINGLRRVLDELTLARTDLEMQIEQLNEELAYLKKNHEEEMKEFSSQLAGQVNVEMDAAPGV
DLTRMLAEMREQYEAIAEKNRRDVEAWFFSKTEELNKEVASNTEMIQTSKTEITDLRRTLQGLEIELQ
SQLSMKAGLENSLAEEVECRYATQLQQIQGVITGLETQLSELRCEMEASNQEQYNMLLDIKTRLEQEIAT
YRNLLGQDAKMAGIGVREGSSGGGGSSSSSNFHSVEESVDGKVVSSRKREI

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 Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15) 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: Structural component of intermediate filaments in the epithelium. Forms heteropolymers with type II keratin KRT5, assembling into keratin intermediate filament network that promotes mechanical resilience of undifferentiated cells, including hair follicle bulge cells, foregut basal progenitors and intestinal crypt cells (PubMed:14708593, PubMed:29805107, PubMed:7539810). Displays an antagonist role with KRT14 in basal epithelial cells, where KRT14 promotes cell differentiation while KRT15 maintains the progenitor state and promotes proliferation and clonogenicity (PubMed:10623468, PubMed:36512409). Promotes the progenitor state in basal keratinocytes by maintaining cytoplasmic YAP1 less effectively than KRT14 due to missing biochemical motifs, thereby allowing higher YAP1 nuclear activity (By similarity). Also contributes to epithelial cell regeneration after injury (PubMed:29805107, PubMed:36512409). In the absence of KRT14, forms a bona fide, but ultrastructurally distinct keratin filament network with KRT5 (PubMed:7539810).

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.