

Recombinant Mouse CTF1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52057

Size: 10ug, 100ug

Protein Name: Cardiotrophin-1 (CT-1)

Synonym: Ctf1

UniProt ID: Q60753

UniProt Link: www.uniprot.org/uniprotkb/Q60753/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 203 AA

Molecular Weight: 22 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSQREGSLEDHQTDSSISFLPHLEAKIRQTHNLARLLTKYAEQLLEEYVQQQGEPFGLPGFSPPRLP
LAGLSGPAPSHAGLPVSELRQDAAALSVLPALLDAVRRRQAELNPRAPRLLRSLEDAARQVRALG
AAVETVLAALGAAARGPGPEPVTATLFTANSTAGIFS AKVLGFHVCGLYGEWVSRTGEDLGQLVP
GGVA

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 Cardiotrophin-1 (CT-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: Functions as a cytokine that binds to the LIF receptor complex (PubMed:7738033, PubMed:9030543). The LIF receptor complex indeed consists of two signaling receptor subunits IL6ST/gp130 and LIFR that transduce the signal into the cell (PubMed:7738033, PubMed:9030543). Functionally, acts as a potent cardiac survival factor, and promotes cardiomyocyte proliferation and hypertrophy (PubMed:7862649, PubMed:8625793, PubMed:9050750). Mechanistically, ligand binding to LIFR, induces heterodimerization with IL6ST/gp130 activating JAK tyrosine kinases (JAK1 or JAK2 and to a lesser extent TYK2) bound to their intracellular domains (PubMed:9030543). These kinases subsequently phosphorylate IL6ST/gp130 and LIFR (PubMed:9030543). The tyrosine phosphorylated signaling receptors serve in turn as docking sites for recruitment and activation of signal transducer and activator of transcription STAT3 (PubMed:9030543).

Subcellular Localization: Secreted .

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.