

Recombinant Mouse CLCF1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51967

Size: 10ug, 100ug

Protein Name: Cardiotrophin-like cytokine factor 1 (B-cell-stimulating factor 3) (BSF-3) (Novel neurotrophin-1) (NNT-1)

Synonym: Clcf1, Bsf3, Nnt1

UniProt ID: Q9QZM3

UniProt Link: www.uniprot.org/uniprotkb/Q9QZM3/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 225 AA

Molecular Weight: 25 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MDLRAGDSWGMLACLCTVLWHLPAVPALNRTGDPGPGPSIQKTYDLTRYLEHQLRSLAGTYLNYLG
PPFNEPDFNPPRLGAETLPRATVNLEVWRSNDRLRLTQNYEAYSHLLCYLRGLNRQAATAELRRSL
AHFCTSLQGLLGSAGVMATLGYPPLPGTEPAWAPGPAHSDFLQKMDDFWLLKELQTWLWRS
AKDFNRLKKKMPPAASVTLHLEAHGF

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-like cytokine factor 1 (B-cell-stimulating factor 3) (BSF-3) (Novel neurotrophin-1) (NNT-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, either alone or by forming a stable complex with soluble CRLF1 or CNTFR. Binds to CNTFR complex (CNTFR, IL6ST/gp130, LIFR) or can signal via trans-signaling using soluble CNTFR subunits. Mechanistically, ligand binding to CNTFR, induces dimerization of the IL6ST/gp130 and LIFR, which activates JAK tyrosine kinases (JAK1 or JAK2 and to lesser extent TYK2) bound to their intracellular domains. These kinases subsequently phosphorylate IL6ST/gp130 and LIFR. The tyrosine phosphorylated signaling receptors serve in turn as docking sites for recruitment and activation of signal transducer and activators of transcription (STAT3 and to lesser extent STAT1). Moreover, CLCF1/CLF heterodimer induces tyrosine phosphorylation of PTPN11, that associates with IL6ST/gp130-LIFR, which in turn recruits PIK3 protein kinase followed by AKT protein phosphorylation. Participates in the survival of embryonic motor neurons (By similarity). Also stimulates B-cells (PubMed:10500198).

Subcellular Localization: Secreted . Note=Secreted as a stable complex with CLCF1. Secretion is CRLF1-dependent.

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.