

Recombinant Human CLCF1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50204

Size: 10ug, 100ug

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

Synonym: CLCF1, BSF3, CLC, NNT1

UniProt ID: Q9UBD9

UniProt Link: www.uniprot.org/uniprotkb/Q9UBD9/entry

Species Source: Human

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
PPFNEPDFNPPRLGAETLPRATVDLEVWRSNDKLRLTQNYEAYSHLLCYLRGLNRQAATAELRRSL
AHFCTSLQGLLGSAGVMAALGYPLPQPLPGTEPTWTPGPAHSDFLQKMDDFWLLKELQTWLWRS
AKDFNRLKKKMPPAAAVTLHLGAHGF

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) (Cardiotrophin-like cytokine) (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 (PubMed:10448081, PubMed:10500198, PubMed:10966616, PubMed:11285233, PubMed:11294841). Binds to CNTFR complex (CNTFR, IL6ST/gp130, LIFR) or can signal via trans-signaling using soluble CNTFR subunits (PubMed:10966616, PubMed:11285233, PubMed:11294841). 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 (PubMed:11294841, PubMed:16782820). These kinases subsequently phosphorylate IL6ST/gp130 and LIFR (PubMed:11294841). 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) (PubMed:10448081, PubMed:10500198, PubMed:10966616, PubMed:11285233, PubMed:11294841, PubMed:16782820). 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 (PubMed:11294841). Participates in the survival of embryonic motor neurons (PubMed:10500198, PubMed:10966616). Also stimulates B-cells (By similarity).

Subcellular Localization: Secreted . Note=Secreted as a stable complex with CLCF1 or soluble form of CNTFR (PubMed:10966616, PubMed:11285233). Secretion is CRLF1- or CNTFR (soluble form)-dependent (PubMed:10966616, PubMed:11285233).

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.