

Recombinant Human CNTF Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50209

Size: 10ug, 100ug

Protein Name: Ciliary neurotrophic factor (CNTF)

Synonym: CNTF

UniProt ID: P26441

UniProt Link: www.uniprot.org/uniprotkb/P26441/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 200 AA

Molecular Weight: 23 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAFTEHSPLTPHRRDLCSRSIWLARKIRSDLTALTESYVKHQGLNKNINLDSADGMPVASTDQWSEL
TEAERLQENLQAYRTFHVLLARLLEDQQVHFTPTGDFHQAIHTLLLQVAAFAYQIEELMILLEYKIPR
NEADGMPINVGDGGLFEKKLWGLKVLQELSQWTVRSIHDLRFISSHQTGIPARGSHYIANNKKM

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 Ciliary neurotrophic factor (CNTF) 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 through the ciliary neurotrophic factor receptor (CNTFR) complex (PubMed:10966616, PubMed:11285233, PubMed:11294841, PubMed:31932351, PubMed:36930708). The CNTFR complex indeed consists of the membrane-anchored non-signaling receptor CNTFR and the two signaling receptor subunits IL6ST/gp130 and LIFR that transduce the signal into the cell (PubMed:36930708). Functionally, promotes neuronal survival, supports differentiation of various neuronal and non-neuronal cells, and importantly regulates oligodendrocyte progenitor proliferation (PubMed:1861138, PubMed:1883844, PubMed:31932351). Mechanistically, ligand binding to the 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). 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:11285233, PubMed:11294841). Can also signal via trans-signaling using soluble forms of CNTFR (PubMed:31932351, PubMed:7681218). Seems to prevent the degeneration of motor axons after axotomy (By similarity).

Subcellular Localization: Cytoplasm . Secreted . Note=The precursor seems to be cytoplasmic (Probable). The lack of a specific hydrophobic segment in the precursor sequence suggests that CNTF is released by damaged cells or is secreted by a mechanism differing from that used for other secretory proteins (By similarity).

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.