Rat CNTF / Ciliary Neurotrophic Factor Protein

Catalog Number: 80012-RNAE

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CNTF

Protein Construction:

A DNA sequence encoding the rat CNTF (P20294) (Met 1-Met 200) was expressed and purified.

Source: Rat

Expression Host: E. coli

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. Immobilized rat CNTF (Cat: 80012-RNAE) at 10 μg/ml (100 μl/well) can bind biotinylated rat CNTFR-His (aa 1-346) (Cat: 80019-R08B) with a linear range of 1.56-50.0 ng/ml. 2. Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED_{50} for this effect is typically 30-120 ng/ml.

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Met 1

Molecular Mass:

The recombinant rat CNTF consisting of 200 amino acids and has a calculated molecular mass of 22.9 kDa. It migrates as an approximately 24 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 0.1M NaCl, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

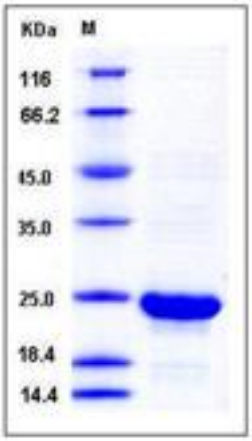
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Ciliary neurotrophic factor (CNTF) is a member of the cytokine family. It is a polypeptide hormone that have functions in promoting neurotransmitter synthesis and neurite outgrowth in certain neuronal populations. It's actions appear to be restricted to the nervous system. Ciliary neurotrophic factor (CNTF) has biological effects through the activation of a multi- subunit receptor complex, consisting of an extracelluar CNTF binding subunit (CNTFα) and two transmembrane signal transduction proteins: glycoprotein gp130 and LIF receptor. CNTF is considered as a potent survival factor of neurons and oligodendrocyteands may be relevant in reducing tissue destruction during inflammatory attacks. CNTF also is a survival factor for neurons of the peripheral sensory sympathetic and ciliary ganglia. It has been reported that CNTF could be an agent that has therapeutic potential and possibly induces differentiation of large multipolar ganglionic phenotype in a subset of progenitors.

References

1.Dutt K, *et al.* (2010) Ciliary neurotrophic factor: a survival and differentiation inducer in human retinal progenitors. In Vitro Cell Dev Biol Anim. 46 (7) : 635-46. 2.Lam A, *et al.*(1991) Sequence and structural organization of the human gene encoding ciliary neurotrophic factor. Gene 102 (2) : 271–6. 3.Bazan JF. (1991) Neuropoietic cytokines in the hematopoietic fold. Neuron 7 (2) : 197–208.