Data Sheet (Cat.No.TMPY-01354)

TargetMol

CNTFR Protein, Human, Recombinant (His)

General Information

Synonyms:	ciliary neurotrophic factor receptor
Protein Construction:	The amino acids sequence corresponding to (Met 1-Pro 346) of human CNTFR (NP_001833.1) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Gln 23
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P26992
Molecular Weight:	36 kDa (predicted); 45-48 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized human CTNFR at 10 μg/ml (100 μl/well) can bind biotinylated human CNTF with a linear range of 1.28-160 ng/ml.
Purity:	> 98 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 100 mM NaCl, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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. Its 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 extracellular 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 oligodendrocytes and may be relevant in reducing tissue destruction during inflammatory attacks. CNTF is also 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.

Reference

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.

Lam A, et al. (1991) Sequence and structural organization of the human gene encoding ciliary neurotrophic factor. Gene 102 (2) : 271-6.

Bazan JF. (1991) Neuropoietic cytokines in the hematopoietic fold. Neuron 7 (2) : 197-208.