

Cardiotrophin 1 Protein, Human, Recombinant

General Information

Synonyms:	cardiotrophin 1;CT-1;CT1
Protein Construction:	A DNA sequence encoding the human CTF1 (NP_001321.1) (Ser2-Ala201) was expressed with two additional amino acids (Gly & Pro) at the N-terminus. Predicted N terminal: Gly
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q16619-1
Molecular Weight:	21.2 kDa (predicted); 26.6 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is typically 2-10 ng/ml.
Purity:	> 85 % 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 PBS, pH 7.4. 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

CTF1 is the first HOX11 protein partner identified that plays an important role in hematopoietic precursor cell immortalization. CTF1 was found to protect a gene from silencing when its DNA-binding sites were interposed between the gene and the telomeric extremity, while it did not affect a gene adjacent to the telomere. Protein fusions containing the CTF1 histone-binding domain displayed similar activities, while mutants impaired in their ability to interact with the histone did not. Cardiotrophin-1 (CTF1) has been reported to act as a trophic factor for a

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few neurons, such as sensory, cholinergic, dopaminergic, motor and cortical neurons. Studies have indicated that CTF1 delays degenerative disease progression in motor neuron disease.

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