

Recombinant Human Cardiotrophin-1, His-tagged

Cat. No. CTF1-136H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	The Human Cardiotrophin His-Tagged Fusion Protein, produced in <i>E. coli</i> , is 22.5 kDa protein containing 200 amino acid residues of the human Cardiotrophin and 12 additional amino acid residues – His Tag (underlined).
Species	Human
Source	E.coli
Description	Cardiotrophin 1 (CT-1) is a 201 amino acid member of the interleukin-6 superfamily. It was identified by its ability to induce hypertrophic response in cardiac myocytes. CT-1 mRNA levels were found both in cardiac myocytes and in cardiac nonmyocytes. CT1 was also detected in abundance in normal adult human lung and was expressed in both fetal and adult airway smooth muscle cells. CT 1 activates gp130 dependent signaling and stimulates the Janus kinase/signal transducers and activators of transcription (JAK/STAT) pathway to transduce hypertrophic and cytoprotective signals in cardiac myocytes. CT1 has also a neurotrophic function. CTF1 deficiency causes increased motoneuron cell death in spinal cord and brainstem nuclei of mice during a period between embryonic day 14 and the first postnatal week.
Purity	Purity of CTF1 Human Recombinant is greater than 90% (SDS-PAGE analyzed).
Formulation	Sterile filtered and lyophilized from 0.5 mg/ml in 0.05M Acetate buffer pH-4.
Purification Method	Three-step procedure using affinity Ni-NTA chromatography and size exclusion chromatography before and after refolding.

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Solubility	Add 0.2 ml of 0.1 M Acetate buffer pH-4 and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10 µg/ml. In higher concentrations the solubility of this antigen is limited.
Specificity	The amino acid sequence of the cardiotrophin 1 human recombinant is 100% Homologous to the amino acid sequence of the cardiotrophin-1 human.
Applications	Western blotting.
Stability	Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C. The lyophilized Cardiophin 1 remains stable until the expiry date when stored at -20°C.

GENE INFORMATION

Gene Name	CTF1 cardiotrophin 1 [Homo sapiens]
Synonyms	CTF1; cardiotrophin 1; CT1; CT-1; Short name=CT-1; Cardiotrophin-1; cardiophin 1
Gene ID	1489
mRNA Refseq	NM_001142544
Protein Refseq	NP_001136016
MIM	600435
UniProt ID	Q16619

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Chromosome Location	16p11.2-p11.1
Pathway	Cytokine-cytokine receptor interaction ; Jak-STAT signaling pathway
Function	cytokine activity; leukemia inhibitory factor receptor binding

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