

# 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 *E. coli*, 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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<b>Solubility</b>	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.
<b>Specificity</b>	The amino acid sequence of the cardiostrophin 1 human recombinant is 100% Homologous to the amino acid sequence of the cardiostrophin-1 human.
<b>Applications</b>	Western blotting.
<b>Stability</b>	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 Cardiostrophin 1 remains stable until the expiry date when stored at -20°C.

## GENE INFORMATION

<b>Gene Name</b>	CTF1 cardiostrophin 1 [ Homo sapiens ]
<b>Synonyms</b>	CTF1; cardiostrophin 1; CT1; CT-1; Short name=CT-1; Cardiostrophin-1; cardiostrophin 1
<b>Gene ID</b>	1489
<b>mRNA Refseq</b>	NM_001142544
<b>Protein Refseq</b>	NP_001136016
<b>MIM</b>	600435
<b>UniProt ID</b>	Q16619

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

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