



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CTF1 Protein
Catalog Number: hRP-0252
Manufacturer: LD Biopharma, Inc.

Introduction

Human CTF1 (Cardiotrophin-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. CTF-1 mRNA levels were found both in cardiac myocytes and in cardiac nonmyocytes. CTF 1 was also detected in abundance in normal adult human lung and was expressed in both fetal and adult airway smooth muscle cells. This protein has been demonstrated to play important roles in vitro for increasing cardio, neuronal, and hepatocytes survivals. CTF1, as Lif protein, 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.

Full length recombinant human CTF1 protein was constructed as a fusion protein and was highly purified using affinity matrix from *E. coli*. After specific proteinase cleavage, native CTF1 protein was collected and suspended in PBS buffer.

Gene Symbol: CTF1 (CT1)
Accession Number: NP_001321
Species: Human
Size: 20 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in PBS Buffer, no any carrier protein.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Pennica,D., et al. *Cardiotrophin-1, a cytokine present in embryonic muscle, supports long-term survival of spinal motoneurons*. Neuron 17 (1), 63-74 (1996)



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Applications

1. Active recombinant protein, may be used for its functional assay.
2. As immunogen for specific antibody production.

Quality Control

1. Purity: > 95% by SDS-PAGE and visualized by silver stain.
2. Functional Test: Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is typically 0.25 – 0.85 ng/ml.
3. Endotoxin Level: < 1EU per 1 ug of protein by the LAL method.

Recombinant Protein Sequence

SRREGSLEDPQTDSSVSLLEAKIRQTHSLAHLTKYAEQLLQEYVQLQGDPFGLPSFSPPR
LPVAGLSAPAPSHAGLPVHERLRLDAAALAALPPLLDVAVCRRQAELNPRAPRLRRLEDAARQA
RALGAAVEALLAALGAANRGPRAEPPAATASAASATGVFPAKVLGLRVCGLYREWLSRTEGDLG
QLLPGGSA