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CTF1 Rat

Cardiotrophin-1 Rat Recombinant
CYK0120

Product Overview

Name	CTF1 Rat

Description

Cardiotrophin-1 Rat Recombinant

Accession (Primary)	Q63086

Synonyms

Cardiotrophin-1, CT-1, Ctf1.

Introduction

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. CT 1 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. CT 1 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. Moreover, CT-1 is a hepatocyte survival factor that efficiently reduces hepatocellular damage in animal models of acute liver injury. Cardiotrophin 1 expression is augmented after hypoxic stimulation and it can protect cardiac cells when added either prior to simulated ischaemia or at the time of reoxygenation following simulated ischaemia. Cardiotrophin 1 can induce expression of the protective heat shock proteins (hsps) in cardiac cells. Cardiotrophin-1 increased ventricular expression of ANP, brain natriuretic peptide (BNP) and angiotensinogen mRNA. Cardiophin 1 levels were significantly elevated in patients with heart failure, patients with dilatative cardiomyopathy, moderate/severe mitral regurgitation, stable and unstable angina and after acute myocardial infarction.

Source

Escherichia Coli.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.

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Stability

Lyophilized Cardiotrophin-1 Rat although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CTF1 Rat should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by SDS-PAGE and HPLC analyses.

Amino acid sequence

MSQREGSLED HQTDSSFSFL PHLEAKIRQT HNLARLLTKY ADQLLEEYVQ QQGEPFGLPG FSPPRLPLAG LSGPAPSHAG LPVSERLRQD AAALSALPAL LDAVRRRQAE LNPRAPRLLR SLEDAARQVR ALGAAVETVL AALGAAARGP VPEPVATSAL FTSNSAAGVF SAKVLGLHVC GLYGEWVSRT EGDLGQLVPG GVA.

Biological Activity

Solubility

It is recommended to reconstitute the lyophilized CTF1 in sterile 4mM HCl not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Precautions

CTF1 Rat is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (Q63086)