9051 Mira Mesa Blvd, #910094
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CTF1 Mouse

Cardiotrophin-1 Mouse Recombinant
CYK0119

Product Overview

Name	CTF1 Mouse

Description

Cardiotrophin-1 Mouse Recombinant

Accession (Primary)	Q60753

Synonyms

CTF1, CT1, CT-1, Cardiophin 1.

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 CTF1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CTF1 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 98.0% as determined by SDS-PAGE.

Amino acid sequence

SQREGSLEDH QTDSSISFLP HLEAKIRQTH NLARLLTKYA EQLLEEYVQQ QGEPFGLPGF SPPRLPLAGL SGPAPSHAGL PVSERLRQDA AALSVLPALL DAVRRRQAEL NPRAPRLLRS LEDAARQVRA LGAAVETVLA ALGAAARGPG PEPVTVATLF TANSTAGIFS AKVLGFHVCG LYGEWVSRTE GDLGQLVPGG VA

Biological Activity