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32-1117: rCT 1 Recombinant Protein

Alternative Name : Cardiotrophin-1,CT-1,Ctf1.

Description

Source : Escherichia Coli. Cardiotrophin-1 Rat Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 203 amino acids and having a molecular mass of 21.4kDa.The CTF1 Rat is purified by proprietary chromatographic techniques. 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.

Product Info

Amount :	10 µg
Purification :	Greater than 95.0% as determined by SDS-PAGE and HPLC analyses.
Content :	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.
Storage condition :	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.
Amino Acid :	MSQREGSLED HQTDSSFSFL PHLEAKIRQT HNLARLLTKY ADQLLEEYVQ QQGEPFGLPG FSPPRLPLAG LSGPAPSHAG LPVSERLRQD AAALSALPAL LDAVRRRQAE LNPRAPRLLR SLEDAARQVR ALGAAVETVL AALGAAARGP VPEPVATSAL FTSNSAAGVF SAKVLGLHVC GLYGEWVSRT EGDLGQLVPG GVA.

Application Note

It is recommended to reconstitute the lyophilized CTF1 in sterile 4mM HCl not less than 100Ã□Âµg/ml, which can then be further diluted to other aqueous solutions. The ED50 as determined by the dose-dependent proliferation of TF-1 cells was found to be < 0.5ng/ml, corresponding to a specific activity of > 2.0Ã□â□□106 units/mg.

For Research Use Only. Not for use in diagnostic/therapeutics procedures.