

## 32-1116: mCT 1 Recombinant Protein

**Alternative Name :** CTF1,CT1,CT-1,Cardiophin 1.

### Description

Source : Escherichia Coli. CTF1 Mouse Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 202 amino acids and having a molecular mass of 21.3kDa. The CTF1 Mouse is purified by proprietary chromatographic techniques. Cardiostrophin 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. Cardiostrophin 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. Cardiostrophin 1 can induce expression of the protective heat shock proteins (hsps) in cardiac cells. Cardiostrophin-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

<b>Amount :</b>	10 µg
<b>Purification :</b>	Greater than 98.0% as determined by SDS-PAGE.
<b>Content :</b>	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.
<b>Storage condition :</b>	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.
<b>Amino Acid :</b>	SQREGSLEDH QTSSISFLP HLEAKIRQTH NLARLLTKYA EQLLEEVQQ QGEPFGLPGF SPRLPLAGL SGPAPSHAGL PVSERLRQDA AALSVPALL DAVRRRQAEI NPRAPRLRS LEDAARQVRA LGAAVETVLA ALGAAARGPG PEPVTATLF TANSTAGIFS AKVLGFHVCV LYGEWVSRTG GDLGQLVPGG VA

### Application Note

It is recommended to reconstitute the lyophilized CTF1 in sterile 4mM HCl to a concentration of 0.1-0.5 mg/ml. Stock solutions should be apportioned into working aliquots and stored at <-200C. Further dilutions should be made in appropriate buffered solutions. The ED50 as determined by the dose-dependent proliferation of TF-1 cells was < 1.0ng/ml, corresponding to a specific activity of > 1,000,000units/mg.

