

## Cardiotrophin-1/CTF1 Protein, Rat

Cat. No.:	HY-P71924
Synonyms:	Ctf1; Cardiotrophin-1; CT-1
Species:	Rat
Source:	E. coli
Accession:	Q63086 (M1-A203)
Gene ID:	29201
Molecular Weight:	Approximately 21.4 kDa

### PROPERTIES

AA Sequence	<pre> MSQREGSLED   HQT DSSFSFL   PHLEAKIRQT   HNLARLLTKY ADQLLEEYVQ   QQGEPFGLPG   FSPPR LPLAG   LSGPAPSHAG LPVSERLRQD   AAALSALPAL   LDAVRRRQAE   LNPRAPRLLR SLEDAAARQVR  ALGAAVETVL   AALGAAARGP   VPEPVATSAL FTSNSAAGVF   SAKVLGLHVC   GLYGEWVSRT   EGD LGQLVPG GVA           </pre>
Biological Activity	<p>1. Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using human TF-1 cells is less than 0.5 ng/mL, corresponding to a specific activity of <math>&gt;2.0 \times 10^6</math> IU/mg.</p> <p>2. Measured in a cell proliferation assay using CTF1 human erythroleukemic cells. The ED50 for this effect is 5.936 ng/mL, corresponding to a specific activity is <math>1.685 \times 10^5</math> units/mg.</p>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 $\mu$ m solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in sterile distilled water.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	Cardiotrophin-1/CTF1 protein takes on a pivotal role as it induces hypertrophy in cardiac myocytes in vitro, emphasizing its influence on cellular processes associated with heart muscle development and enlargement. The protein's functional
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impact is mediated through its binding to and activation of the ILST/gp130 receptor, revealing a specific molecular pathway through which Cardiotrophin-1/CTF1 exerts its effects. This interaction underscores its significance in signaling cascades related to cardiac myocyte responses, providing insights into the regulatory mechanisms that contribute to the modulation of cardiac hypertrophy.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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