

## Cardiotrophin-1/CTF1 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P7150
Synonyms:	rMuCT-1; CTF1
Species:	Mouse
Source:	HEK293
Accession:	Q60753 (S2-A203)
Gene ID:	13019
Molecular Weight:	22-27 kDa

### PROPERTIES

AA Sequence	<p>           S Q R E G S L E D H    Q T D S S I S F L P    H L E A K I R Q T H    N L A R L L T K Y A            E Q L L E E Y V Q Q    Q G E P F G L P G F    S P P R L P L A G L    S G P A P S H A G L            P V S E R L R Q D A    A A L S V L P A L L    D A V R R R Q A E L    N P R A P R L L R S            L E D A A R Q V R A    L G A A V E T V L A    A L G A A A R G P G    P E P V T V A T L F            T A N S T A G I F S    A K V L G F H V C G    L Y G E W V S R T E    G D L G Q L V P G G            V A         </p>
Biological Activity	The ED <sub>50</sub> is <1.25 ng/mL as measured by TF-1 cells, corresponding to a specific activity of >0.8 × 10 <sup>6</sup> units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against PBS.
Endotoxin Level	<0.2 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O or PBS.
Storage & Stability	Stored at -20°C. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer. 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	<p>Cardiotrophin-1 (CT-1) is required for cardiac myocyte maturation and is capable of promoting cell survival in neonatal rat cardiomyocytes subjected to serum deprivation through an antiapoptotic pathway mediated by MAPK, ERK1/2CT1<sup>[1]</sup>. CT-1 exhibits impressive neuroprotective effects and delay the procession of motor neuron degenerative disorders by prolonging the median neuronal survival time, improving motor function and promoting regeneration in neonatal rat motor neurons in mouse models of amyotrophic lateral sclerosis, progressive motor neuropathy and spinal muscular atrophy and in adult</p>
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rats with spinal cord injuries<sup>[2]</sup>.

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## REFERENCES

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[1]. López-Yoldi M, et al. Cardiotrophin-1: A multifaceted cytokine. *Cytokine Growth Factor Rev.* 2015 Oct;26(5):523-32.

[2]. Peng L, et al. Cardiotrophin-1 stimulates the neural differentiation of human umbilical cord blood-derived mesenchymal stem cells and survival of differentiated cells through PI3K/Akt-dependent signaling pathways. *Cytotechnology.* 2017 Dec;69(6):933-941.

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

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