

Recombinant Rat Cardiotrophin-1

Information

Gene ID	29201
Accession #	Q63086
Alternate Names	
Source	Escherichia coli.
M.Wt	Approximately 21.4 kDa, a single non-glycosylated polypeptide chain containing 203 amino acids.
AA Sequence	MSQREGSLED HQTDSFSFL PHLEAKIRQT HNLARLLTKY ADQLLEEYVQ QQGEPFGLPG FSPRLPLAG LSGPAPSHAG LPVSERLRQD AAALSALPAL LDAVRRRQAE LNPAPRLLR SLEDAARQVR ALGAAVETVL AALGAAARGP VPEPVATSAL FTSNSAAGVF SAKVLGLHVC GLYGEWVSRT EGDLGQLVPG GVA
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 30 % Acetonitrile, 0.1 % TFA.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 4mM HCl to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ 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 > 2.0 × 10 ⁶ IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10µg	100µg	500µg
Recombinant Rat Cardiotrophin-1	10µg	100µg	500µg

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- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rRtCT-1 as determined by LAL method.

Description

Cardiotrophin1 (CT1) is a member of the cytokine family which also includes IL-6, IL-11, leukemia inhibitory factor (LIF), oncostatin M (OSM), and ciliary neurotrophic factor (CNTF). CT-1 is a pleiotropic cytokine which is expressed in various tissues including the adult heart, skeletal muscle, ovary, colon, prostate and fetal lung. Studies showed CT-1 which induces cardiac myocyte hypertrophy in vitro can bind to and activate the ILST/gp130 receptor. Rat CT1 encodes a 203 amino acid (a.a.) residue protein that lacks a hydrophobic signal peptide and it shares 94 % a.a. and 79 % a.a. sequence identity with human and murine CT-1.

Reference

1. Pennica D, Wood WI, Chien KR. 1996. Cytokine Growth Factor Rev. 7:81-91
2. Robledo O, Fourcin M, Chevalier S, et al. 1997. J Biol Chem. 272:4855-63
3. Gerhard DS, Wagner L, Feingold EA, et al. 2004. Genome Res. 14:2121-7.

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