

Recombinant Human Cardiotrophin-1

#R00545

Size: 10 µg/100 µg/500 µg

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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Cardiotrophin-1 (CT-1) 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)[Pennica, 1996 #1320]. 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. Human CT-1 encodes a 201 amino acid (a.a.) residue protein that lacks a hydrophobic signal peptide and it shares 78 % a.a. and 80 % a.a. sequence identity with murine and rat CT-1.

AA Sequence

MSRREGSLEDPQTDSSVSLLPHLEAKIRQTHSLAHL
 LTKYAEQLLQEYVQLQGDPFGLPSFSPRLPVAGLSAP
 APSHAGLPVHERLRDLAAAALPPLLDVCCRQAEL

NPRAPRLLRRLEDAARQARALGAAVEALLAALGAAN
 RGPRAEPPAATASAASATGVFPAKVLGLRVCGLYRE
 WLSRTEGDLGQLLPGGSA

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 4 mM 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.

Product Specification

Accession	Q16619
GeneID	1489
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 21.2 kDa, a single non-glycosylated polypeptide chain containing 201 amino acids.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
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 1.0 ng/ml, corresponding to a specific activity of > 1.0× 10 ⁶ IU/mg.
Physical	Sterile Filtered White Lyophilized

Appearance	(freeze-dried) powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 30 % Acetonitrile and 0.1 % TFA.
Endotoxin	Less than 0.1 EU/µg of rHuCT-1 as determined by LAL method.