

Recombinant Rat Cardiotrophin-1

#R00583

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). 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 CT-1 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.

AA Sequence

MSQREGSLEDHQTDSSFSFLPHLEAKIRQTHNLARLL
TKYADQLLEEYVQQQGEPFGLPGFSPPRLPLAGLSG
PAPSHAGLPVSERLRQDAAALSALPALLDAVRRRRQAE

LNPRAPRLLRSLEDAARQVRALGAAVETVLAALGAAA
RGPVPEPVATSALFTSNSAAGVFSAKVLGLHVCGLYG
EWVSRTEGDLGQLVPGGVA

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.

Product Specification

Accession	Q63086
GeneID	29201
Species	Rat
Source	Escherichia coli.
Molecular Weight	Approximately 21.4 kDa, a single non-glycosylated polypeptide chain containing 203 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 0.5 ng/ml, corresponding to a specific activity of > 2.0 × 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, 0.1 % TFA.
Endotoxin	Less than 1 EU/µg of rRtCT-1 as determined by LAL method.