

DATASHEET

Version 20181206

CT-1, Mouse

Cat. No.: Z03287-1

Size: 1.0 mg

Synonyms: CTF1, CT-1

Description:

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 associated with the pathophysiology of several types of heart disease including hypertension, myocardial infarction, valvular heart disease, and congestive heart failure. The protein exerts its cellular effects by interacting with the glycoprotein 130 (gp130)/leukemia inhibitory factor receptor beta (LIFR) heterodimer. CT-1 activates phosphatidylinositol 3-kinase (PI-3 kinase) in cardiac myocytes and enhances transcription factor NF- κ B DNA-binding activities. CT-1 is highly expressed in the heart, skeletal muscle, prostate and ovary and to lower levels in lung, kidney, pancreas, thymus, testis and small intestine.

Recombinant mouse Cardiotrophin-1 produced in HEK293 cells is a polypeptide chain containing 202 amino acids. A fully biologically active molecule, rmCT-1 has a molecular mass of 22-27 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

```
00001 SQREGSLEDH QTDSSISFLP HLEAKIRQTH NLARLLTKYA
00041 EQLLEEVVQQ QGEPFGLPGF SPPRLPLAGL SGPAPSHAGL
00081 PVSERLRQDA AALSVLPALL DAVRRRQAEI NPRAPRLRS
00121 LEDAARQVRA LGAAVETVLA ALGAAARGPG PEPVTVATLF
00161 TANSTAGIFS AKVLGFHVCV LYGEWVSRTG GDLGQLVPGG
00201 VA
```

Source: HEK 293

Species: Mouse

Biological Activity: The EC₅₀ value of Mouse Cardiotrophin-1 determined by the dose-dependent proliferation of TF-1 cells was ≤ 1.25 ng/ml, corresponding to a specific activity of $\geq 0.8 \times 10^6$ units/mg.

Molecular Weight: 22-27 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 μ g/ml.

Purity: > 95% as analyzed by SDS-PAGE.

Endotoxin Level: < 0.2 EU/ μ g, determined by LAL method.

Storage: Lyophilized recombinant Mouse Cardiotrophin-1 remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Mouse Cardiotrophin-1 should be stable up to 1 week at 4°C or up to 3 months at -20°C.