SANTA CRUZ BIOTECHNOLOGY, INC.

# Cardiotrophin-1 (N-20): sc-20867

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Cardiotrophin-1 (CT-1) is a member of the IL-6 family of cytokines, which signal through gp130 receptor complexes. gp130 complexes with several different receptor subunits to transmit signals from Cardiotrophin-1, IL-6, LIF, OSM, CNTF and IL-11. Cardiotrophin-1 binds to and activates the leukemia inhibitory factor (LIF) receptor/gp130 receptor complex and has been shown to induce hypertrophy in cardiac myocytes *in vitro*. Cardiotrophin-1, a secreted protein expressed at high levels in myocardium during cardiogenesis, has been shown to promote proliferation and survival of embryonic cardiomyocytes, suggesting a role for Cardiotrophin-1 in the activation of gp130 during cardiac development. Cardiotrophin-1 is highly expressed in heart, prostate, ovary and skeletal muscle. Lower levels of expression are seen in lung, kidney, pancreas, thymus, testis and small intestine.

## CHROMOSOMAL LOCATION

Genetic locus: CTF1 (human) mapping to 16p11.2; Ctf1 (mouse) mapping to 7 F3.

## SOURCE

Cardiotrophin-1 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Cardiotrophin-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20867 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

Cardiotrophin-1 (N-20) is recommended for detection of Cardiotrophin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Cardiotrophin-1 (N-20) is also recommended for detection of Cardiotrophin-1 in additional species, including equine.

Suitable for use as control antibody for Cardiotrophin-1 siRNA (h): sc-39327, Cardiotrophin-1 siRNA (m): sc-39328, Cardiotrophin-1 shRNA Plasmid (h): sc-39327-SH, Cardiotrophin-1 shRNA Plasmid (m): sc-39328-SH, Cardiotrophin-1 shRNA (h) Lentiviral Particles: sc-39327-V and Cardiotrophin-1 shRNA (m) Lentiviral Particles: sc-39328-V.

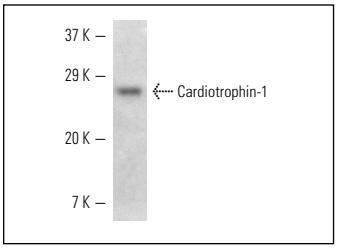
Molecular Weight of Cardiotrophin-1: 21 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA




Cardiotrophin-1 (N-20): sc-20867. Western blot analysis of human recombinant Cardiotrophin-1.

## SELECT PRODUCT CITATIONS

1. Natal, C., et al. 2008. Cardiotrophin-1 is expressed in adipose tissue and upregulated in the metabolic syndrome. Am. J. Physiol. Endocrinol. Metab. 294: 52-60.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.