

Cardiotrophin-2 (D-16): sc-49306

BACKGROUND

Cardiotrophin-1 and -2 possess anti-inflammatory properties and send signals through gp130 receptor complexes. Cardiotrophin-1 displays trophic effects on cardiac myocytes and on a subset of neurons. The presence of the leukemia inhibitory factor (LIF) receptor, as a component of the gp130 receptor complex, is required for signal transduction of Cardiotrophin-1 in motor neurons.

Cardiotrophin-2 (CT-2), also designated neuropoietin (NP), is crucial for neuronal precursor development and maturation and has been found to increase platelet counts associated with splenomegaly. Cardiotrophin-2 is a secreted protein expressed solely in embryonic samples. Studies indicate that NP may sustain the *in vitro* survival of embryonic motor neurons and may increase the proliferation of neural precursors when associated to epidermal growth factor and fibroblast growth factor 2.

REFERENCES

1. Cognet, I., et al. 2004. Expression of biologically active mouse ciliary neurotrophic factor (CNTF) and soluble CNTFR α in *Escherichia coli* and characterization of their functional specificities. *Eur. Cytokine Netw.* 15: 255-262.
2. Derouet, D., et al. 2004. Neuropoietin, a new IL-6-related cytokine signaling through the ciliary neurotrophic factor receptor. *Proc. Natl. Acad. Sci. USA* 101: 4827-4832.
3. Vlotides, G., et al. 2004. Novel neurotrophin-1/B cell-stimulating factor-3 (NNT-1/BSF-3)/cardiotrophin-like cytokine (CLC) – a novel gp130 cytokine with pleiotropic functions. *Cytokine Growth Factor Rev.* 15: 325-336.
4. Schroers, A., et al. 2005. Dynamics of the gp130 cytokine complex: a model for assembly on the cellular membrane. *Protein Sci.* 14: 783-790.
5. Ohno, M., et al. 2006. Neuropoietin induces neuro-epithelial cells to differentiate into astrocytes via activation of Stat3. *Cytokine* 36: 17-22.

CHROMOSOMAL LOCATION

Genetic locus: Ctf2 (mouse) mapping to 7 F3.

SOURCE

Cardiotrophin-2 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cardiotrophin-2 precursor of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-49306 P, (100 μ g 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.

RESEARCH USE

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

APPLICATIONS

Cardiotrophin-2 (D-16) is recommended for detection of Cardiotrophin-2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-2 (D-16) is also recommended for detection of Cardiotrophin-2 (also designated Cardiotrophin-2) in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Cardiotrophin-2 siRNA (m): sc-61188, Cardiotrophin-2 shRNA Plasmid (m): sc-61188-SH and Cardiotrophin-2 shRNA (m) Lentiviral Particles: sc-61188-V.

Molecular Weight of Cardiotrophin-2: 22 kDa.

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) 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.

PROTOCOLS

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