

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cardiotrophin-1/CT-1 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse Cardiotrophin-1/CT-1 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 89228
Purification	Protein A or G purified from ascites
Immunogen	<i>E. coli</i> -derived recombinant human Cardiotrophin-1/CT-1 Ser2-Ala201 Accession # Q16619
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human Cardiotrophin-1/CT-1 (Catalog # 612-CD)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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). It was originally isolated based on its ability to induce cardiac myocyte hypertrophy *in vitro*. CT-1 has since been shown to be a pleiotrophic cytokine with overlapping actions with other IL-6 family members on a variety of cell types. Human CT-1 encodes a 201 amino acid (aa) residue protein that lacks a hydrophobic signal peptide. The mechanism of CT-1 release from cells is currently not understood. Human and mouse CT-1 share 80% aa sequence identity and exhibit cross-species activity. CT-1 is highly expressed in heart, skeletal muscle, liver, lung and kidney. Lower levels of CT-1 expression is also seen in testis and brain. CT-1 initiates downstream signaling pathways through the heterodimerization of gp130 and the LIF receptor β subunit. A third α receptor subunit has been implicated in the receptor complex.

References:

1. Pennica, D. *et al.* (1996) Cytokine and Growth Factor Reviews 7:81.
2. Robledo, O. *et al.* (1997) J. Biol. Chem. 272:4855.