Human CLC Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF962

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CLC in Western blots. In Western blots, less than 1% cross-reactivity with recombinant human CT-1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human CLC Leu28-Phe225 Accession # Q9UBD9
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. 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	0.1 µg/mL	Recombinant Human CLC (Catalog # 962-CL)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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	**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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Cardiotrophin-like cytokine (CLC) (also known as novel neurotrophin-1 (NNT-1) and B cell stimulating factor (BSF-3)) is a recently discovered 22-25 kDa member of the IL-6 family of cytokines (1, 2, 3). As such, it is expressed as a long type I cytokine with four α-helices in it structure (2). Human CLC is synthesized as a 225 amino acid precursor that contains a 27 aa signal sequence and a 198 aa mature region. It contains one potential N-linked glycosylation site that is apparently utilized, and two distinct binding sites for CNTFRα and CLF (4, 5). Although CLC has a signal sequence, it is not secreted unless noncovalently dimerized to either CLF or soluble CNTFRα (5, 6). Once dimerized, CLC signals through a tripartite receptor complex composed of gp130, LIFRβ and CNTFRα (membrane-bound) (5, 7). Within the IL-6 family, human CLC is most homologous to cardiotrophin-1, sharing approximately 29% amino acid sequence identity (8). Human to mouse, mature CLC is 96% aa identical. CLC is a trophic factor for motor neurons, a stimulator of ACTH release from corticotrophs, and an inducer of IgE synthesis and B cell proliferation (9, 10, 11). Cells known to express CLC include embryonic muscle, lung epithelium, and mesenchyme in various regions (12).

References:

1. Murakami, M. *et al.* (2004) Growth Factors **22**:75.
2. Ernst, M. & B.J. Jenkins (2004) Trends Genet. **20**:23.
3. Senaldi, G. *et al.* (1999) Proc.Natl. Acad. Sci. USA **96**:11458.
4. Perret, D. *et al.* (2003) J. Biol. Chem. **279**:43961.
5. Plun-Favreau, H. *et al.* (2001) EMBO J. **20**:1692.
6. Elson, G.C.A. *et al.* (2000) Nat. Neurosci. **3**:867.
7. Lelievre, E. *et al.* (2001) J. Biol. Chem. **276**:22476.
8. Derouet, D. *et al.* (2004) Proc. Natl. Acad. Sci. USA **101**:4827.
9. Forger, N.G. *et al.* (2003) J. Neurosci. **23**:8854.
10. Auernhammer, C.J. *et al.* (2003) Endocrinology **144**:1202.
11. Senaldi, G. *et al.* (2002) J. Immunol. **168**:5690.
12. de Bovis, B. *et al.* (2005) Cell Commun. Signal. **3**:1.

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