

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CLC in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human (rh) CT-1, rhCNTF, rhIL-6, rhIL-11, rhLIF, or rhOSM is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 138815
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human CLC Leu28-Phe225 Accession # Q9UBD9
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

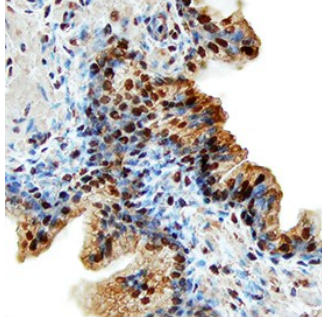
APPLICATIONS

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 CLC (Catalog # 962-CL)
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



CLC in Human Prostate. CLC was detected in immersion fixed paraffin-embedded sections of human prostate using Mouse Anti-Human CLC Monoclonal Antibody (Catalog # MAB962) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm and nuclei. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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-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 its 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 CNTFR α and CLF (4, 5). Although CLC has a signal sequence, it is not secreted unless noncovalently dimerized to either CLF or soluble CNTFR α (5, 6). Once dimerized, CLC signals through a tripartite receptor complex composed of gp130, LIFR β and CNTFR α (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:

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