Human CNTF Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-257-NA

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CNTF in direct ELISAs and Western blots. In direct ELISAs, approximately 100% cross-reactivity with recombinant rat CNTF is observed and less than 1% cross-reactivity with rhCNTF Rα is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human CNTF (R&D Systems, Catalog # 257-NT) Ala2-Met200 Accession # P26441
Endotoxin Level	<0.1 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

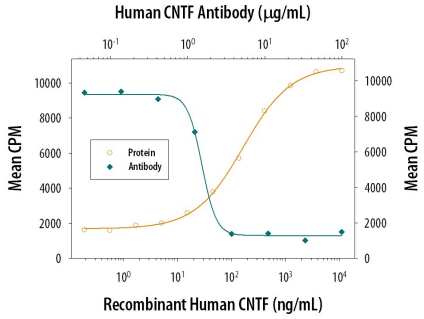
APPLICATIONS

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	0.1 µg/mL	Recombinant Human CNTF (Catalog # 257-NT)
Neutralization	Measured by its ability to neutralize CNTF-induced proliferation in the TF-1 human erythroleukemic cell line [Kitamura, T. *et al.* (1989) J. Cell Physiol. **140**:323]. The Neutralization Dose (ND_{50}) is typically 3-8 µg/mL in the presence of 400 ng/mL Recombinant Human CNTF.	

DATA

Neutralization



Cell Proliferation Induced by CNTF and Neutralization by Human CNTF Antibody. Recombinant Human CNTF (Catalog # 257-NT) stimulates proliferation in the TF-1 human erythroleukemic cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human CNTF (400 ng/mL) is neutralized (green line) by increasing concentrations of Human CNTF Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-257-NA). The ND_{50} is typically 3-8 µg/mL.

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 from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

Ciliary neurotrophic factor (CNTF) is a polypeptide initially purified from chick embryo ocular tissue and identified as a trophic factor for embryonic chick ciliary parasympathetic neurons in culture. Subsequent studies have demonstrated that CNTF is a survival factor for additional neuronal cell types including: dorsal root ganglion sensory neurons, sympathetic ganglion neurons, embryonic motor neurons, major pelvic ganglion neurons and hippocampal neurons. CNTF has also been shown to prevent the degeneration of motor axons after axotomy.

The gene for human CNTF has been localized to the proximal region of the long arm of chromosome 11. The cDNA for human CNTF encodes a 200 amino acid residue polypeptide that lacks a signal sequence. CNTF is highly conserved across species and exhibits cross-species activities. Human and rat CNTF share approximately 83% homology in their protein sequence. CNTF is structurally related to IL-6, IL-11, LIF, and OSM. All of these four helix bundle cytokines share gp130 as a signal-transducing subunit in their receptor complexes.