

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CNTF R α in direct ELISAs and Western blots. In Western blots, approximately 100% cross-reactivity with recombinant rat CNTF R α is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 121723
Purification	Protein A or G purified from ascites
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human CNTF R α Gln23-Pro346 (predicted) Accession # P26992
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μ m filtered solution in PBS.

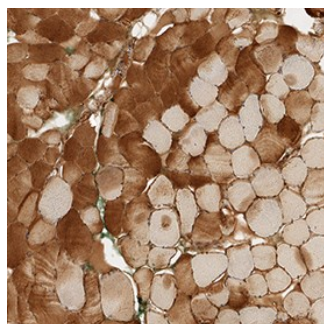
APPLICATIONS

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 μ g/mL	Recombinant Human CNTF R α (Catalog # 303-CR)
Immunohistochemistry	5-25 μ g/mL	See Below

DATA

Immunohistochemistry



Detection of CNTFR alpha in Human Skeletal Muscle.

CNTFR alpha was detected in immersion fixed paraffin-embedded sections of Human Skeletal Muscle using Mouse Anti-Human CNTFR alpha Monoclonal Antibody (Catalog # MAB303) at 5 μ g/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to sarcolemma and sarcoplasm of skeletal muscle cells. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

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

The high-affinity CNTF receptor complex, which mediates the biological action of CNTF, contains three proteins: the ligand-binding α subunit (CNTF R α), and the two signal-transducing proteins LIF R β and gp130. Whereas LIF R β and gp130 are widely expressed in many cell types, the expression of CNTF R α is restricted to the central and peripheral nervous systems. cDNAs encoding human and rat CNTF R α share 94% amino acid (aa) sequence identity. Human CNTF R α cDNA encodes a 372 aa precursor protein with a 22 aa residue signal peptide and four potential glycosylation sites. CNTF R α differs from other cytokine receptors in that it lacks transmembrane and cytoplasmic domains and is anchored to cell membranes by a glycosylphosphatidylinositol (GPI) linkage. Similar to other GPI-linked proteins, soluble CNTF receptor α (CNTF sR α) can be released from the cell surface by phosphatidylinositol-specific phospholipase C. CNTF sR α can be released from skeletal muscle in response to peripheral nerve injury and high concentrations of CNTF sR α have also been detected in human cerebrospinal fluid. CNTF sR α binds CNTF in solution and the complex can act on cells that express only LIF R β and gp130 but not CNTF R α .