

**DESCRIPTION**

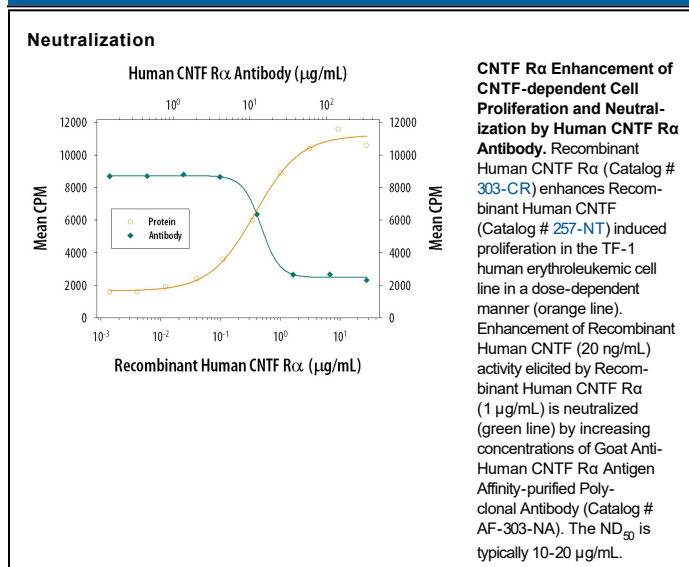
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CNTF R $\alpha$ in direct ELISAs and Western blots. In Western blots, greater than 50% cross-reactivity with recombinant rat CNTF sR $\alpha$ is observed and less than 5% cross-reactivity with recombinant human (rh) IL-2 sR $\gamma$ and rhIL-6 sR is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant human CNTF R $\alpha$ Gln23-Pro346 (predicted) Accession # P26992
<b>Endotoxin Level</b>	<0.10 EU per 1 $\mu$ g of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ 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 $\mu$ 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 $\mu$ g/mL	Recombinant Human CNTF R $\alpha$ (Catalog # 303-CR)
<b>Neutralization</b>		Measured by its ability to neutralize CNTF R $\alpha$ -enhanced proliferation in the TF-1 human erythroleukemic cell line. The Neutralization Dose (ND <sub>50</sub> ) is typically 10-20 $\mu$ g/mL in the presence of 1 $\mu$ g/mL Recombinant Human CNTF R $\alpha$ and 20 ng/mL Recombinant Human CNTF.

**DATA**



**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

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