

**DESCRIPTION**

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|---------------------------|---|
| <b>Species Reactivity</b> | Rat   |
| <b>Specificity</b>        | Detects human CNTF R $\alpha$ in direct ELISAs and Western blots. In direct ELISAs, greater than 50% cross-reactivity with recombinant human CNTF sR $\alpha$ 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 Sf 21-derived recombinant rat CNTF R $\alpha$ Ala19-Pro346<br>Accession # Q08406  |
| <b>Conjugate</b>          | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm   |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

**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>Neutralization</b>       | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

**PREPARATION AND STORAGE**

|                                |   |
|--------------------------------|---|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

**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 CNTF R $\alpha$  have been isolated from both human and rat and were shown to share 94% amino acid (aa) sequence identity. Rat CNTF R $\alpha$  cDNA encodes a 372 amino acid residue precursor protein that apparently has a 22 aa residue signal peptide and five 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 $\alpha$ .

**PRODUCT SPECIFIC NOTICES**

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