

DESCRIPTION

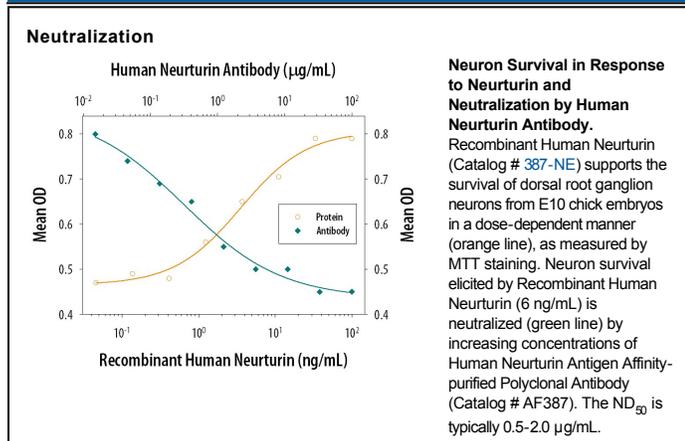
Species Reactivity	Human
Specificity	Detects human Neurturin in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse Neurturin is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Neurturin Ala96-Val197 Accession # Q99748
Endotoxin Level	<0.10 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. *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	0.1 µg/mL	Recombinant Human Neurturin (Catalog # 387-NE)
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human brain (cerebellum) subjected to Antigen Retrieval Reagent-Basic (Catalog # CTS013)
Neutralization		Measured by its ability to neutralize the effect of Neurturin on dorsal root ganglion neurons from E10 chick embryos. Davies, A. M. (1989) in <i>Neurotrophic Factor Bioassay Using Dissociated Neurons</i> , Nerve Growth Factor. Rush, R. A. (eds): John Willey and Sons, Ltd. 95. The Neutralization Dose (ND ₅₀) is typically 0.5-2.0 µg/mL in the presence of 6 ng/mL Recombinant Human Neurturin.

DATA



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. *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

Neurturin (NTN) is a member of the GDNF family of ligands which also includes glial cell-derived neurotrophic factor (GDNF), persephin, and artemin. GDNF family proteins are distant members of the TGF- β superfamily and contain a conserved seven cysteine motif found in the entire family. Human NTN encodes a 197 amino acid (aa) preproprotein with a 19 aa residue putative signal peptide and a 76 aa pro region. Proteolytic cleavage of the pro-protein occurs at an RXXR consensus sequence. The native protein is a disulfide-linked homodimer with a calculated monomeric mass of about 12.5 kDa. The amino acid sequence of human NTN shares 91% identity to mouse NTN. NTN also shares about 42% similarity with GDNF. The bioactivities of all GDNF family ligands are mediated through a receptor complex composed of a high affinity ligand binding component (GFR α 1 - GFR α 4) and a common signaling component, cRET (receptor tyrosine kinase). NTN prefers to bind GFR α 2 but can also bind GFR α 1. NTN can promote the survival of a variety of neurons including sympathetic, sensory, and central nervous system neurons. The wide expression of NTN in both neuronal and non-neuronal tissues suggests that NTN may regulate the development and maintenance of the central and peripheral nervous systems and other systems.

References:

1. Kotzbauer, P. *et al.* (1996) *Nature* **384**:467.
2. Baloh, R.H. *et al.* (1997) *Neuron* **18**:793.
3. Baloh, R.H. *et al.* (1998) *Neuron* **21**:1291.