

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse β -NGF in direct ELISAs.
Source	Monoclonal Rabbit IgG Clone # 2529C
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived mouse β -NGF Ser122-Gly241 Accession # Q6LDU8
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*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.

Neutralization Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

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

BACKGROUND

NGF was discovered as a molecule that promoted the survival and differentiation of sympathetic and sensory neurons in the peripheral nervous system (1). In addition, β -NGF can act in the central nervous system as a trophic factor for basal forebrain cholinergic neurons (2). β -NGF has also been shown to have biological effects on a variety of neurons, glia, and nonneural cells (3). NGF was initially isolated from the mouse submandibular gland as a 7S complex composed of three non-covalently linked subunits, α , β , and γ . It is now known that both the α and γ subunits of NGF are members of the kallikrein family of serine proteases while the β subunit, called β -NGF, exhibits all the biological activities ascribed to NGF (4 - 5). Recombinant mouse β -NGF is a homodimer of two 120 amino acid polypeptides. It shares approximately 90% homology at the amino acid level with human β -NGF and 95.8% with rat β -NGF (6).

NGF is the first member discovered in the Neurotrophin family, which includes brain-derived neurotrophic factor (BDNF), neurotrophin-3 (NT-3), and neurotrophin-4 (NT-4). NT-6 and NT-7 were also identified in fish (7, 8). Biological activities of the NGF family are mediated through binding and activation of two types of receptors, TrKs (TrKA, TrKB, and TrKC) and NGF receptor. TrKs are single-pass membrane proteins belonging to the receptor tyrosine kinase family. The neurotrophins bind to TrKs specifically. NGF is specific for TrKA, BDNF and NT-4 for TrKB, and NT-3 mostly for TrKC. NGF receptor is a TNF receptor superfamily protein that binds to all the neurotrophins with similar affinity (9). TrKA is often referred to as the high-affinity receptor. However, most high affinity binding is mediated by the interaction of NGF receptor with TrKA. Both NGF and its receptors are expressed during development, adult life and aging in many cell types in CNS and PNS, immune and inflammatory systems. NGF signaling has been shown to play an important role in neuroprotection and repair (3, 10).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.