Rabbit antibody to beta NGF: IgG

Catalogue No.:	R-093-500
Description:	FUNCTION: Nerve growth factor is important for the development and maintenance of the sympathetic and sensory nervous systems. It stimulates division and differentiation of sympathetic and embryonic sensory neurons. SUBUNIT: Homodimer, associated by noncovalent forces. SUBCELLULAR LOCATION: Secreted protein. SIMILARITY: Belongs to the NGF-beta family.
Related products:	R-085-100, Rabbit antibody to beta NGF: whole serum PE-019-25, Mouse Nerve Growth Factor (NGF) Protein, 25 ug PE-019-100, Mouse Nerve Growth Factor (NGF) Protein, 100 ug PE-019-500, Mouse Nerve Growth Factor (NGF) Protein, 500 ug
Batch No.:	See product label
Unit size:	500 ug
Antigen:	Native mouse beta NGF purified from submaxillary salivary gland (95% purity by PAGE)
Antibody Type:	Rabbit polyclonal
Other Names:	Beta-nerve growth factor
Accession:	P01139 NGF_MOUSE;
Produced in:	Rabbit
Purity:	Protein G purified IgG
Applications:	IHC, 1-site ELISA, WB, immunoblot, inhibition of biological activity. A concentration of 1-3 ug/mL is recommended for IHC, western blot and immunoblot, ELISA, inhibition of biological activity in vitro. Use neat for in vivo studies at 2-10 ug/mL (ED50). This antibody was tested on cultured sensory neurons supported by 100 ng/mL of purified mouse beta NGF. Be advised that 2ug/mL will neutralize 100 ng/mL of mouse NGF. The higher 10ug/mL is only recommended if the concentration of NGF being used is higher than 100 ng/mL such as the 200 or 500 ng/mL that is occasionally used in some culture systems. This antiserum completely inhibits neuronal survival and the outgrowth actions of murine NGF in chicken DRG in vitro. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
Specificity:	A cross reactivity of less than 1% to recombinant human BDNF, NT3, NT4/5 by ELISA has been shown.
Cross-reactivity:	This antiserum is known to cross react with mouse, rat, human and avian NGF but not bovine NGF.
Form:	Lyophilised from PBS, pH 7.2-7.6 without preservatives
Reconstitution:	Reconstitute in 500 uL of sterile, ultrapure water. Centrifuge to remove any insoluble material.
Storage:	Store lyophilized antibody at 2-8C. After reconstitution keep aliquots at -20C to -80C for a higher stability, and at 2-8C with an appropriate antibacterial agent. Avoid repetitive freeze/thaw cycles. Glycerol (1:1) may be added for an additional stability.
Expiry Date:	12 months after purchase
Specific References:	Laurina Z. et al (2009) Growth factors/cytokines/defensins and apoptosis in periodontal pathologies. Stomatologija. 2009;11(2):48-54.

FOR RESEARCH USE ONLY

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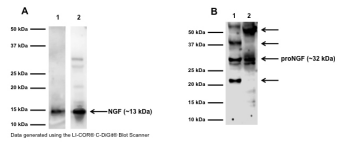
General References:

Lee H.W. et al (2007) Expression of nerve growth factor is upregulated in the rat thymic epithelial cells during thymus regeneration following acute thymic involution. Regul Pept. 2007 Jun 7;141(1-3):86-95

1. Cassina P. et al (2005) Astrocyte activation by fibroblast growth factor-1 and motor neuron apoptosis: implications for amyotrophic lateral sclerosis. J Neurochem. 2005 Apr;93(1):38-46.
2. Zhou, X. F. et al (1994) J Neurosci Methods 54, 95-102.
3. Angeletti, P. U. et al (1968) Adv Enzymol Relat Areas Mol Biol 31, 51-75.
4. Ebendal, T. et al (1989) J Neurosci Res 22, 223-240.
5. Hesse K. et al. (1997) Neurosci Lett. Aug 8;231(2):83-6.
6. Miao J et al. (2012) Neurosci Res. Dec;74(3-4):269-76.



A) Western Blot analysis of NGF expression in mouse salivary gland homogenate (50 ug, Lane 2) with rabbit polyclonal IgG antibody to beta NGF, R-093-500 (5 ug/mL). R-093-500 detects a strong band at 13 kDa consistent with the expected molecular weight of mature NGF monomer. Lane 1: 100 ng of rhNGF protein.
B) Western Blot analysis of NGF expression in human brain (50 ug, Lane 1) and human PC3 prostate cancer cell lysates (100 ug, Lane 2), with rabbit polyclonal IgG antibody to native NGF, R-093-500 (2 ug/mL). The antibody detects a strong band at 32 kDa consistent with the molecular weight of glycosylated proNGF monomer. ProNGF is known to be the predominant NGF isoform in brain (Fahnenstock et al., 2001). Additional bands are observed at ~22 kDa (non-specific band observed when blotting with pre-immune serum) and ~40 kDa and ~50 kDa. The latter two bands have not been characterized, but might represent differently glycosylated proNGF-isoforms as reported by Reinshagen et al., 2000; Lobos et al., 2005; Pedraza et al., 2005; Pundavela et al., 2014.

Western Blotting Method: SDS-PAGE: denaturing and reducing, 12% Bis-Tris gel; Semi-Dry Transfer: Tris-Glycine (Towbins) buffer with 20% methanol; Membrane: Nitrocellulose (0.45 um); Blocking: 5% skim milk in TBST, 1 hour at RT; Primary antibody: 2-5 ug/mL, overnight at 4°C; Secondary antibody: anti-rabbit-HRP (1/6000), 1 hour at RT; Detection: Chemiluminiscence.

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