

Product datasheet for **TA328880**

Ngf Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Highly purified 2.5 S mouse NGF.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 5% sucrose (no preservative).
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	nerve growth factor
Database Link:	NP_038637 Entrez Gene 4803 Human Entrez Gene 310738 Rat Entrez Gene 18049 Mouse P01139



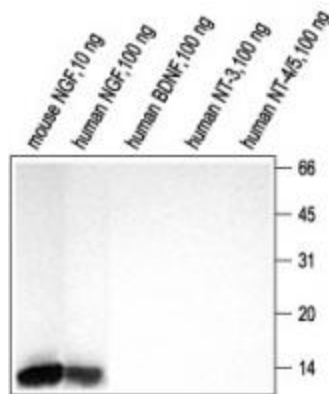
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Background:

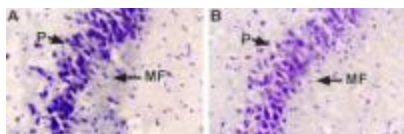
The neurotrophins ("neuro" means nerve and "trophe" means nutrient) are a family of soluble, basic growth factors which regulate neuronal development, maintenance, survival and death in the CNS and the PNS. NGF, the first member of the family to be discovered, was originally purified as a factor able to support survival of sympathetic and sensory spinal neurons in culture. It is synthesized and secreted by sympathetic and sensory target organs and provides trophic support to neurons as they reach their final target. Neurotrophin secretion also increases in the nervous system following injury. Schwann cells, fibroblasts, and activated mast cells normally synthesize NGF constitutively, however direct trauma and induced cytokines combine to increase neurotrophin production in these cells after injury. NGF is purified in three forms: the 7S, 2.5S and \tilde{A} ?. The 7S, 130 kDa, form occurs naturally in mouse submaxillary glands, and is a multimeric protein composed of two α , one \tilde{A} ? and two ? subunits. The name is derived from its sedimentation co-efficient, 7S. The biologically active subunit is the \tilde{A} ?, which is a 26 kDa dimer composed of two identical 120 amino acid chains held together by hydrophobic interactions.⁵ The 2.5S form is 9 amino acids shorter than the \tilde{A} ? form, because of proteolysis that occurs during the purification process. The structural hallmark of all the neurotrophins is the characteristic arrangement of the disulfide bridges known as the cysteine knot, which has been found in other growth factors such as PDGF. There is a 95.8% homology between the rat and mouse forms, and a 85% homology between the human and mouse. NGF has been shown to regulate neuronal survival, development function and plasticity. Recently, involvement of NGF in processes not involving neuronal cells has been shown, such as asthma, psoriasis¹⁰ and wound healing. The biological effects of NGF are mediated by two receptors: TrkA, which is specific for NGF, and p75, which binds all the neurotrophins.

Synonyms:

Beta-NGF; HSN5; MGC161426; MGC161428; NGFB; NID67

Product images:

WB analysis using Anti-mNGF antibody (1:200). Immunohistochemistry Expression of NGF in rat brain. IHC staining of rat hippocampal mossy fiber terminal zone using Anti-mNGF antibody. A. The mossy fiber terminal zone (MF) is seen as the gray area (arrow) adjacent to the pyramidal layer (P). The pyramidal layer is visualized using cresyl violet (purple-labeled cells). B. The antibody was pre-incubated with the immunogen. The lack of staining in the MF zone (arrow) demonstrates specificity.



Expression of NGF in rat brain. Immunohistochemical staining of rat hippocampal mossy fiber terminal zone using Anti-mNGF antibody. A. The mossy fiber terminal zone (MF) is seen as the gray area (arrow) adjacent to the pyramidal layer (P). The pyramidal layer is visualized using cresyl violet (purple-labeled cells). B. The antibody was pre-incubated with the immunogen. The lack of staining in the MF zone (arrow) demonstrates specificity.