



Catalog Number: 11050-R711

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General Information	
Immunogen:	Recombinant Human NGF / NGFB Protein (Catalog#11050-HNAC)
Clone ID:	R711
Ig Type:	Rabbit IgG
Applications:	Neutralization
Specificity:	Human NGF / NGFB
Formulation:	0.2 µm filtered solution in Histidine and Arginine buffer containing 120mM NaCl, 0.02% Tween 80, pH6.0
Storage:	< -20°C

Preparation

This antibody was obtained from a rabbit immunized with purified, recombinant Human NGF / NGFB (rh NGF / NGFB; Catalog#11050-HNAC; NP_002497.2; Ser122-Arg239) and was produced using recombinant antibody technology.

Specificity

Human NGF / NGFB

Has cross-reactivity with Mouse β-NGF (Catalog#50385-MNAC) in ELISA assay

Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

Background

Nerve growth factor (NGF) is important for the development and maintenance of the sympathetic and sensory nervous systems. NGF protein was identified as a large complex consisting of three non-covalently linked subunits, α, β, and γ, among which, the β subunit, called β-NGF (beta-NGF), was demonstrated to exhibit the growth stimulating activity of NGF protein. NGFB/beta-NGF gene is a member of the NGF-beta family and encodes a secreted protein which homodimerizes and is incorporated into a larger complex. NGF protein acts via at least two receptors on the surface of cells (TrkA and p75 receptors) to regulate neuronal survival, promote neurite outgrowth, and up-regulate certain neuronal functions such as mediation of pain and inflammation. In addition, previous studies indicated that NGF may also have an important role in the regulation of the immune system.

Reference

Castellanos MR, *et al.* (2003) Evaluation of the neurorestorative effects of the murine beta-nerve growth factor infusions in old rat with cognitive deficit. *Biochem Biophys Res Commun.* 312 (4): 867-72.

Wang TH, *et al.* (2008) Effects of pcDNA3-beta-NGF gene-modified BMSC on the rat model of Parkinson's disease. *J Mol Neurosci.* 35 (2): 161-9.

Perrard MH, *et al.* (2009) Redundancy of the effect of TGFbeta1 and beta-NGF on the second meiotic division of rat spermatocytes. *Microsc Res Tech.* 72 (8): 596-602.

Character	Method	Result
Specificity	ELISA	Human NGF / NGFB (Catalog#1050-HNAC)
Antibody concentration	UV	> 1 mg/mL
Aggregation	SEC-HPLC	< 5% aggregation
Purity	SDS-PAGE	> 95%
Endotoxin	LAL gel clotting	< 3 EU/mg

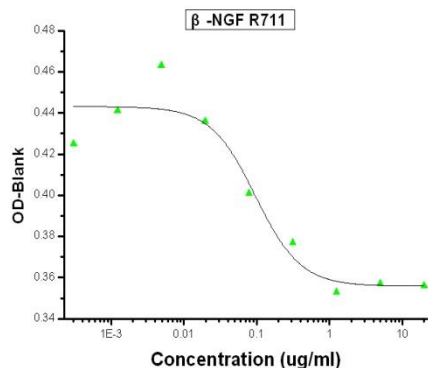
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Applications

Block – In a functional ELISA which immobilized recombinant Human β -NGF (Catalog#11050-HNAC) at 2 μ g/mL (100 μ L/well) in the plate, the Rabbit anti-Human β -NGF Monoclonal Antibody (Catalog#11050-R711) can block the binding of 5 μ g/mL of biotinylated Human NTRK1/Fc Chimera Protein (Catalog#11073-H03H) to human β -NGF, the EC50 is 3.84 μ g/mL.

Neutralization – The neutralization activity of antibody is Measured by its ability to neutralize β -NGF-induced proliferation in the TF-1 human erythroleukemic cell line. The Neutralization titer (IC50) is typically 0.048-0.19 μ g/mL in the presence of 10 ng/mL Recombinant Human β -NGF.



Cell Proliferation Induced by β -NGF was Neutralized by Human β -NGF Antibody. Recombinant Human β -NGF (Catalog 11050-HNAC) stimulates proliferation in the TF-1 human erythroleukemic cell line. Proliferation elicited by Recombinant Human β -NGF (10 ng/mL) is neutralized by increasing concentrations of Rabbit Anti-Human β -NGF Monoclonal Antibody (Catalog#11050-R711). The IC50 is typically 0.048-0.19 μ g/mL.