

## DESCRIPTION

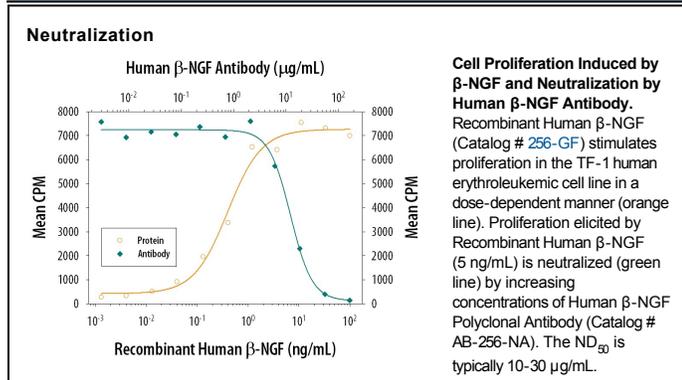
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human $\beta$ -NGF in direct ELISAs and Western blots. In direct ELISAs and Western blots (non-reducing conditions), less than 5% cross-reactivity with recombinant human BDNF is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Protein A or G purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human $\beta$ -NGF Ser122-Ala241 Accession # CAA36832
<b>Endotoxin Level</b>	<0.10 EU per 1 $\mu$ g of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

## 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
<b>Western Blot</b>	1 $\mu$ g/mL	Recombinant Human $\beta$ -NGF (Catalog # 256-GF)
<b>Neutralization</b>		Measured by its ability to neutralize $\beta$ -NGF-induced proliferation in the TF-1 human erythroleukemic cell line [Kitamura, T. <i>et al.</i> (1989) <i>J. Cell Physiol.</i> <b>140</b> :323]. The Neutralization Dose (ND <sub>50</sub> ) is typically 10-30 $\mu$ g/mL in the presence of 5 ng/mL Recombinant Human $\beta$ -NGF.

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 1 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

NGF was initially isolated in the mouse submandibular gland as a 7S complex composed of three non-covalently linked subunits,  $\alpha$ ,  $\beta$ , and  $\gamma$ . Both the  $\alpha$  and  $\gamma$  subunits of NGF are members of the kallikrein family of serine proteases while the  $\beta$  subunit, called  $\beta$ -NGF or 2.5S NGF, exhibits all the biological activities ascribed to NGF. Recombinant human  $\beta$ -NGF is a homodimer of two 120 amino acid polypeptides. The human protein shares approximately 90% homology at the amino acid level with both the mouse and rat  $\beta$ -NGF and exhibits cross-species activity.

NGF is a well-characterized neurotropic protein that plays a critical role in the development of sympathetic and some sensory neurons in the peripheral nervous system. In addition, NGF can also act in the central nervous system as a trophic factor for basal forebrain cholinergic neurons. NGF has also been shown to have biological effects on non-neuronal tissues. NGF is mitogenic for a factor-dependent human erythroleukemic cell line, TF-1. NGF has been found to increase the number of mast cells in neonatal rats and to induce histamine release from peritoneal mast cells. NGF will enhance histamine release and strongly modulate the formation of lipid mediators by basophils in response to various stimuli. NGF will also induce the growth and differentiation of human B lymphocytes as well as suppress apoptosis of murine peritoneal neutrophils. These results, taken together, suggest that NGF is a pleiotropic cytokine which, in addition to its neurotropic activities, may have an important role in the regulation of the immune system.