

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived
Ser122-Ala241
Accession # CAA36832

N-terminal Sequence Analysis Ser122

Predicted Molecular Mass 13.5 kDa (monomer)

SPECIFICATIONS

SDS-PAGE 13 kDa, reducing conditions

Activity Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. Kitamura, T. *et al.* (1989) J. Cell Physiol. **140**:323. The ED₅₀ for this effect is 0.2-2 ng/mL.

Endotoxin Level <0.10 EU per 1 μ g of the protein by the LAL method.

Purity >97%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 μ m filtered solution in Acetic Acid with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 μ g/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.

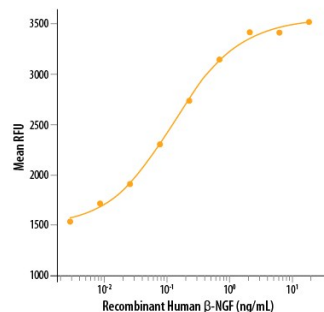
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

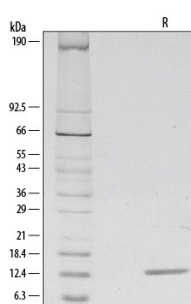
DATA

Bioactivity



Recombinant Human β -NGF (Catalog # 256-GF) stimulates cell proliferation of the TF-1 human erythroleukemic cell line. The ED₅₀ for this effect is typically 0.2-2 ng/mL.

SDS-PAGE



1 μ g/lane of Recombinant Human β -NGF was resolved with SDS-PAGE under reducing (R) conditions and visualized by silver staining, showing a single band at 13 kDa.

BACKGROUND

NGF was initially isolated in the mouse submandibular gland as a 7S complex composed of three non-covalently linked subunits, α , β , and γ . Both the α and γ subunits of NGF are members of the kallikrein family of serine proteases while the β subunit, called β -NGF or 2.5S NGF, exhibits all the biological activities ascribed to NGF. Recombinant human β -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 β -NGF and exhibits cross-species activity.

NGF is a well-characterized neurotrophic 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 neurotrophic activities, may have an important role in the regulation of the immune system.