

DESCRIPTION

Source *Spodoptera frugiperda*, Sf 21 (baculovirus)-derived
Ser122-Gly241
Accession # P25427.2

N-terminal Sequence Analysis Ser122

Predicted Molecular Mass 13.2 kDa (monomer)

SPECIFICATIONS

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 0.1-0.6 ng/mL.

Endotoxin Level <1.0 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 PBS and NaCl. See Certificate of Analysis for details.

PREPARATION AND STORAGE

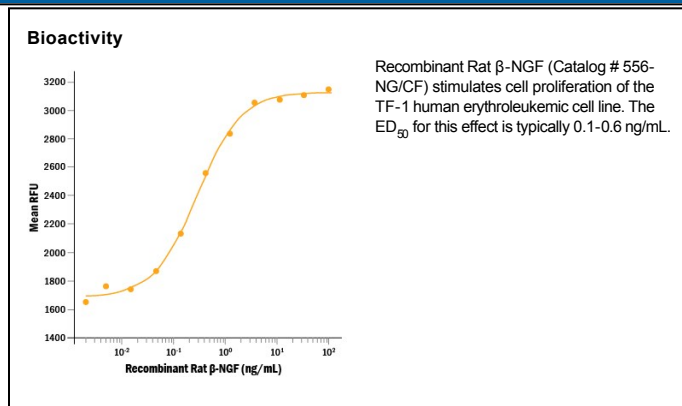
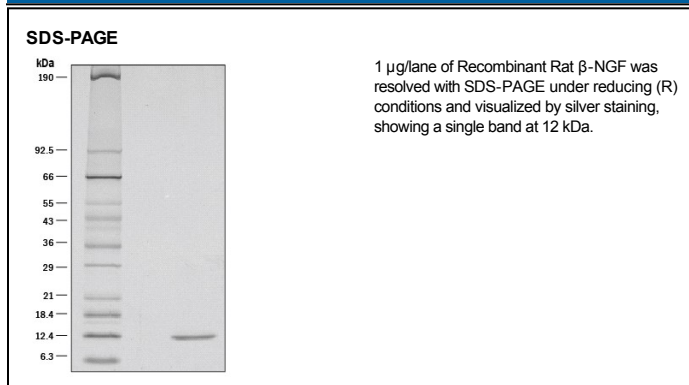
Reconstitution Reconstitute at 100 μ g/mL in sterile PBS.

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



BACKGROUND

NGF was initially isolated in the mouse submandibular gland over three decades ago as a 7S complex composed of three non-covalently linked subunits, α , β , and γ . It is now known that 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 rat 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.