

Product Information

NGF- β , human recombinant, expressed in NSO Cells

Catalog Number **N1408**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonym: nerve growth factor- β

Product Description

Nerve growth factor (NGF) 7S is characterized as a non-covalent aggregate containing three types of polypeptide chains (α , β , and γ). NGF- β is isolated from dissociated, homogeneous NGF 7S. The gene encoding human NGF- β has been localized to chromosome 1 (p22.1) by somatic cell hybridization.^{1,2} Comparison of the mouse and human genes indicates the two genes are organized with similar intron/exon structure.³

The production of natural NGF- β occurs in epithelial cells,⁴ and the pituitary gland.^{5,6} Also, nerves of the peripheral nervous system are sources of NGF- β . NGF- β promotes the survival and cholinergic phenotype of basal forebrain cholinergic neurons and stimulates neurite outgrowth of embryonic trigeminal motor neurons *in vitro*.⁴

NGF- β mRNA is detected in hippocampal pyramidal and granule cells,^{7,8} and these cells stain for NGF- β .⁹ NGF- β stimulates mast cell proliferation¹⁰ and acts as a mitogen for T and B lymphocytes.¹¹ IL-1 induces NGF- β production by fibroblasts,¹² and prostaglandins and β -adrenergic compounds induce NGF production in astrocytoma cells.¹³

Human recombinant NGF- β is a homodimer of two, 120 amino acid polypeptides. The human protein shares ~90% homology at the amino acid level with both mouse and rat NGF- β . It is lyophilized from a 0.2 μm -filtered solution of 0.2% acetic acid (pH 3.1), containing 5 mg bovine serum albumin (BSA) as carrier protein.

Purity: $\geq 97\%$

EC₅₀: 0.15–3.00 ng/mL

The biological activity of human recombinant NGF- β is measured in a cell proliferation assay using TF-1 cells, a human erythroleukemic cell line.¹⁴ The EC₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute at 100 $\mu\text{g}/\text{mL}$ in sterile PBS containing $\geq 0.1\%$ human or bovine serum albumin.

Storage/Stability

Store the product at $-20\text{ }^{\circ}\text{C}$.

After reconstitution, store at $2\text{--}8\text{ }^{\circ}\text{C}$ for a maximum of 3 months. For extended storage, freeze in working aliquots at $-70\text{ }^{\circ}\text{C}$ or $-20\text{ }^{\circ}\text{C}$. Repeated freezing and thawing is not recommended.

References

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