

Human β -NGF / Beta-NGF Protein

Catalog Number: 11050-HNAC



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

Beta-NGF; HSN5; NGFB

Protein Construction:

A DNA sequence encoding the mature form of human β -NGF (NP_002497.2) (Ser 122-Arg 239) was expressed.

Source: Human

Expression Host: CHO Stable Cells

QC Testing

Purity: $\geq 95\%$ as determined by SDS-PAGE, $\geq 90\%$ as determined by SEC-HPLC, $\geq 90\%$ as determined by SEC-MALS (Routinely tested).

Bio Activity:

Measured in a cell proliferation assay using TF-1 human erythroleukemic cells.

The ED50 for this effect is typically 0.2-2 ng/ml.

Endotoxin:

< 1.0 EU per μ g of the protein as determined by the LAL method

Predicted N terminal: Ser 122

Molecular Mass:

The mature recombinant human β -NGF consists of 118 amino acids and has a predicted molecular mass of 13.2 kDa. β -NGF exists as a non-disulfide linked homodimer in solution. The molecular weight of this protein is around 29.7 kDa verified by SEC-MALS (Routinely tested).

Formulation:

Lyophilized from sterile 40mM His, 40mM Arg, 150mM NaCl, pH 5.5

Normally 5% - 8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C .

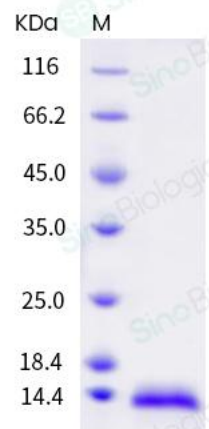
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

1. 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.
2. 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.
3. 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.