



Nerve Growth Factor beta, human recombinant (rHubeta-NGF)

Catalog No: 99852
Lot No: XXXXX
Source: *E. coli*
Synonyms: Beta Polypeptide, NGF, NGFB, HSAN5, Beta-NGF, MGC161426, MGC161428

Background

NGF-beta has nerve growth stimulating activity and the complex is involved in the regulation of growth and the differentiation of sympathetic and certain sensory neurons. Mutations in this gene have been associated with hereditary sensory and autonomic neuropathy, type 5 (HSAN5), and dysregulation of this gene's expression is associated with allergic rhinitis.

Description

Nerve Growth Factor-beta human recombinant produced in *E. coli* is a non-covalently disulfide-linked homodimer, non-glycosylated, polypeptide chain containing 2 identical 121 amino acids with a molecular weight of two 13.6 kDa polypeptide monomers. NGF-b is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The beta-NGF protein was lyophilized from a 0.2 µm filtered solution containing no additives or preservatives.

Solubility

It is recommended to reconstitute the lyophilized NGF-b in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Beta-NGF, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution NGF-Beta should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

MSSSHPIFHRG EFSVCDSVSV WVGDKTTATD IKGKEVMVLG EVNINNSVFK QYFFETKCRD PNPVDSGCRG IDSKHWNSYC
TTTHTFVKALT MDGKQAARF IRIDTACVCV LSRKAVRRA

Activity

The ED₅₀, calculated by its ability to stimulate chick E9 DRG neurite outgrowth was found to be <1.0 ng/ml, corresponding to a specific activity of >1,000,000 units/mg.

CONTACT US TODAY

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51



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