Recombinant Human NGF

Cat. No. NGF-495H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Beta-NGF produced in CHO cells is a noncovalently disulfide-linked homodimer, of two 118 amino acids polypeptide monomers and having a molecular mass of 26.5 kDa.
Species	Human
Source	CHO
Description	Beta-NGF is a neurotrophic factor structurally related to BDNF, NT-3 and NT-4. These proteins belong to the cysteine-knot family of growth factors that assume stable dimeric structures. Beta-NGF is a potent neurotrophic factor that signals through its receptor beta-NGFR, and plays a crucial role in the development and preservation of the sensory and sympathetic nervous systems. Beta-NGF also acts as a growth and differentiation factor for B lymphocytes and enhances B-cell survival. The functional form of human beta-NGF is a homodimer and the three disulfide bonds are required for biological activity.
Biological Activity	The ED50 as determined by its ability to stimulate chick E9 DRG neurite outgrowth was found to be < 1 ng/ml, corresponding to a Specific Activity of 1.0 x 10^6 IU/mg.
Purity	Greater than 95% as determined by (a) Analysis by RP-HPLC; (b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.
Molecular Weight	The molecular mass was determined and found to be 13203 Da by Mass Spectrum.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Amino-Acid Sequence	The full sequence was verified by MS/MS.
Endotoxin	Less than 0.08 ng/μg (0.8 IEU/μg) of rHuβ-NGF.
Form	The protein was lyophilized from a concentrated (1mg/ml) solution in 20mM PB, pH 7.2, 200mM NaCl buffer.
Reconstitution	It is recommended to reconstitute the lyophilized rHuβ-NGF in sterile 18MΩ-cm H2O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.
Storage	Lyophilized rHuβ-NGF although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuβ-NGF 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 avoid freeze-thaw cycles.

GENE INFORMATION

Gene Name	NGF nerve growth factor (beta polypeptide) [Homo sapiens]
Official Symbol	NGF
Synonyms	NGF; nerve growth factor (beta polypeptide); NGFB; HSAN5; Beta-NGF; MGC161428; Beta-nerve growth factor; nerve growth factor, beta subunit; nerve growth factor, beta polypeptide; beta-nerve growth factor; OTTHUMP00000013653; MGC161426
Gene ID	4803
mRNA Refseq	NM_002506

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Protein Refseq	NP_002497
MIM	162030
UniProt ID	P01138
Chromosome Location	1p13.1
Function	growth factor activity; rve growth factor receptor binding; receptor signaling protein activity

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