

## Recombinant Human NGF

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

### SPECIFICATION

<b>Product Overview</b>	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.
<b>Species</b>	Human
<b>Source</b>	CHO
<b>Description</b>	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.
<b>Biological Activity</b>	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 <sup>6</sup> IU/mg.
<b>Purity</b>	Greater than 95% as determined by (a) Analysis by RP-HPLC; (b) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.
<b>Molecular Weight</b>	The molecular mass was determined and found to be 13203 Da by Mass Spectrum.

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<b>Amino-Acid Sequence</b>	The full sequence was verified by MS/MS.
<b>Endotoxin</b>	Less than 0.08 ng/g (0.8 IEU/g) of rHuβ-NGF.
<b>Form</b>	The protein was lyophilized from a concentrated (1mg/ml) solution in 20mM PB, pH 7.2, 200mM NaCl buffer.
<b>Reconstitution</b>	It is recommended to reconstitute the lyophilized rHuβ-NGF in sterile 18MΩ-cm H <sub>2</sub> O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
<b>Storage</b>	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

<b>Gene Name</b>	NGF nerve growth factor (beta polypeptide) [ Homo sapiens ]
<b>Official Symbol</b>	NGF
<b>Synonyms</b>	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
<b>Gene ID</b>	4803
<b>mRNA Refseq</b>	NM_002506

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

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