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# **DATASHEET**

Recombinant human beta-NGF protein

#### **Product overview**

Name Recombinant human beta-NGF protein

Cat No HB9303

**Biological description** beta-NGF is a neurotrophic factor found in many tissues and is involved in a range of biological

activities such as embryonal development, survival, and regeneration of mammalian sympathetic and

sensory neuron.

It is also involved in the immune system and has been shown to downregulate IFN-gamma production

by T-cells.

Also implicated in survival and regeneration of neurons.

NGF-beta, BDNF, GDNF, CNTF, LDN, SB431542, Y27632 and XAV939 are used in neural stem cells

(NSC) proliferation and differentiation workflows.

Species of origin huma

Alternative names Recombinant Human beta Nerve Growth Factor, Beta Polypeptide, NGF, NGFB, HSAN5, Beta-NGF,

MGC161426, MGC161428.

**Biological action** Activator >95%

**Description** Neurotrophic factor related to BDNF, NT-3 and NT-4

### **Biological Data**

 $\textbf{Application notes} \hspace{1cm} \textbf{ED}_{50} = 1.3-2~\mu\text{g/ml} \text{ (determined by stimulation of proliferation of TF-1 cells and is typically <1.0~ng/ml,}$ 

corresponding to a specific activity of >1,000,000units/mg.

## **Solubility & Handling**

Storage instructions Solubility overview -20°C

To make a stock solution, reconstitute in sterile  $18M\Omega cm$  water at a concentration >  $100 \mu g/ml$ , which can then be diluted to make a working solution

Handling

- Solutions should be made in sterile deionized water (not less than 100 μg/ml). This solution can then be further diluted with other aqueous solutions.
- Following reconstitution, solutions may be stored at 4 °C and are useable for around 2-7 days and for future use store at -18 °C.
- For long term storage, a carrier protein (0.1% HSA or BSA) should be added to stock solutions.
   Solutions should be aliquoted into tightly sealed vials for storage at -20°C. Freeze-thaw cycles should be prevented.

Shipping Conditions Important Stable for ambient temperature shipping. Follow storage instructions on receipt.

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### **Chemical Data**

UniProt ID P01138
Source Escherichia Coli

Appearance White lyophilized powder (sterile filtered & freeze-dried)

### References

Studies on the expression of the beta nerve growth factor (NGF) gene in the central nervous system: level and regional distribution of NGF mRNA suggest that NGF functions as a trophic factor for several distinct populations of neurons

Shelton DL et al (1986) Proc Natl Acad Sci U S A 83(8)

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Recombinant human beta-nerve growth factor (NGF): biological activity and properties in an enzyme immunoassay

Soderstrom S *et al* (1990) J Neurosci Res 27(4) **PubMedID** 2079723

Studies on the regulation of beta-nerve growth factor gene expression in the rat iris: the level of mRNA-encoding nerve growth factor is increased in irises placed in explant cultures in vitro, but not in irises deprived of sensory or sympathetic innervat

Shelton DL *et al* (1986) J Cell Biol 102(5) **PubMedID**3700478