

Store at
-20C
#84087

Human β -NGF Recombinant Protein

20 μ g**Orders:** 877-616-CELL (2355)
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.**MW (kDa):**
27.3**UniProt ID:**
#P01138**Entrez-Gene Id:**
4803

Background

β -NGF is the prototypical member of the neurotrophin family of growth factors (1). β -NGF is involved in neuronal survival, differentiation, and growth (1,2). Outside of the nervous system, NGF is produced by a variety of immune cells, including B cells, T cells, monocytes, and mast cells (3,4). β -NGF binds to and signals through two distinct receptors, TrkA and p75NTR (1,2). Cellular responses induced by NGF are modulated by receptor expression. For example, TrkA leads to the inhibition of apoptosis and neuronal differentiation. In contrast, signaling through p75NTR in the absence of TrkA induces cell death. (1,2). NGF signaling via TrkA is characterized by activation of the PI3K/Akt and PLC γ pathways (1,2). NGF signaling via p75^{NTR} induces JNK and NF κ B activation (1,2). Aberrant NGF signaling may be linked to the onset of Alzheimer's disease (5,6).

Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 μ g h β -NGF.

Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

Source / Purification

Recombinant human β -NGF was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity

The bioactivity of recombinant h β -NGF was determined in a TF-1 cell proliferation assay. The ED₅₀ of each lot is less than or equal to 5 ng/mL.

Background References

1. Bibel, M. and Barde, Y.A. (2000) *Genes Dev* 14, 2919-37.
2. Huang, E.J. and Reichardt, L.F. (2003) *Annu Rev Biochem* 72, 609-42.
3. Frossard, N. et al. (2004) *Eur J Pharmacol* 500, 453-65.
4. Jiang, Y. et al. (2007) *J Immunol* 179, 6297-304.
5. Matrone, C. et al. (2009) *Proc Natl Acad Sci U S A* 106, 11358-63.
6. Matrone, C. et al. (2008) *Proc Natl Acad Sci U S A* 105, 13139-44.

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.

