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## Human Neurotrophin-3 (hNT-3)

10 µg

**For Research Use Only. Not for Use in Diagnostic Procedures.**

MW (kDa):	UniProt ID:	Entrez-Gene Id:
14	#P20783	4908

### Background

NT-3 is a member of the structurally related neurotrophin family of proteins, which includes  $\beta$ -NGF, BDNF and NT-4 (1). NT-3 is expressed in a number of cell types including neuronal cells, eosinophils, and melanocytes (1-3). NT-3 is required for the development of peripheral sensory neurons (4). NT-3 is secreted from cells as a precursor protein, which is proteolytically cleaved into the mature form (1). NT-3 signaling is mediated through two distinct receptors, the neurotrophin receptor p75NTR and the Trk tyrosine kinase receptor TrkC. While all neurotrophins bind to the p75NTR receptor, NT-3 preferentially binds to TrkC and, with lesser affinity, TrkB (1).

### Endotoxin

Less than 0.01 ng endotoxin/1 µg hNT-3.

### Purity

>98% as determined by SDS-PAGE of 6 µg reduced (+) and non-reduced (-) recombinant hNT-3. All lots are greater than 98% pure.

### Source / Purification

Recombinant human Neurotrophin-3 (hNT-3) Tyr139-Thr257 (Accession #NP\_002518) was produced in *E.coli* at Cell Signaling Technology.

### Bioactivity

The bioactivity of recombinant hNT-3 was determined in a TrkC-transfected NIH/3T3 cell proliferation assay. The ED<sub>50</sub> of each lot is between 0.5 - 5 ng/ml.

### Background References

- Huang, E.J. and Reichardt, L.F. (2001) *Annu Rev Neurosci* 24, 677-736.
- Noga, O. et al. (2003) *Clin Exp Allergy* 33, 649-54.
- Truzzi, F. et al. (2008) *J Invest Dermatol* 128, 2031-40.
- Tessarollo, L. et al. (1994) *Proc Natl Acad Sci U S A* 91, 11844-8.

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