

# Human Neurotrophin-4 (hNT-4)



**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

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**MW (kDa):**  
14

**UniProt ID:**  
#P34130

**Entrez-Gene Id:**  
4909

## Background

NT-4 is a member of the structurally related neurotrophin family of proteins, which includes  $\beta$ -NGF, BDNF and NT-3 (1). NT-4 is expressed in a number of cell types and tissues, including neuronal cells, normal breast epithelial cells, melanocytes, activated T cells, and granulocytes (1-5). NT-4 is required for the development of peripheral sensory neurons (6,7). NT-4 may be important for the development of long term memory (8). Increased NT-4 expression in melanoma cells promotes cell proliferation and migration (5). NT-4 is secreted from cells as a precursor protein, which is proteolytically cleaved into the mature form (1). NT-4 signaling is mediated through two distinct receptors, the neurotrophin receptor p75NTR and the Trk tyrosine kinase receptor TrkB. While all neurotrophins bind to the p75NTR receptor, NT-4 preferentially binds to the TrkB receptor (1).

## Endotoxin

Less than 0.01 ng endotoxin/1  $\mu$ g hNT-4.

## Purity

>98% as determined by SDS-PAGE of 6  $\mu$ g reduced (+) and non-reduced (-) recombinant hNT-4. All lots are greater than 98% pure.

## Source / Purification

Recombinant human Neurotrophin-4 (hNT-4) Gly81-Ala210 (Accession #NP\_006170) was produced in *E.coli* at Cell Signaling Technology.

## Bioactivity

The activity of hNT-4 was assessed by quantification of phospho-TrkB in TrkB transfected NIH/3T3 cells. The observed ED<sub>50</sub> values are between 1-4 ng/ml.

## Background References

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