

# Growth Factor Data Sheet

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Neurotrophin 4 (NTF4), also known as NT5, is a member of the NGF family of neuronal and epithelial growth factors. Neurotrophins have six conserved cysteine residues that are involved in the formation of three disulfide bonds. Human NT4 shares 48 - 52% amino acid sequence identity with human  $\beta$ -NGF, BDNF and NT3. It shares 91% and 95% amino acid sequence identity with mouse and rat NT4/5, respectively. The protein is secreted as a homodimer and can also form heterodimers with BDNF or NT3. NT4 binds and induces receptor dimerization and activation of TrkB and promotes the development and survival of selected peripheral and CNS neurons. NT4 induced TrkB signaling augments NMDA receptor activity and increases neuronal sensitivity to excitotoxic cell death. NT4 is secreted by activated T cells and granulocytes and contributes to tissue regeneration at inflammation sites.

<b>Catalog Number</b>	<b>1170-04</b>
<b>Product Name</b>	<b>NTF4, Human</b> Recombinant Human Neurotrophin 4 Neurotrophic Factor 4 NTF4 NTF5 NT4/5
<b>Source</b>	<i>Escherichia coli</i>
<b>MW</b>	~28.0 kDa (260 total amino acid)
<b>Sequence</b>	MGVSETAPAS RRGELAVCDA VSGWVTD RRT AVDLRGREVE VLGEVPAAGG SPLRQYFFET RCKADNAEEG GPGAGGGGCR GVDRRHVVSE CKAKQSYVRA LTADAQGRVG WRWIRIDTAC VCTLLSRTGR A
<b>Accession Number</b>	<a href="#">P34130</a>
<b>Purity</b>	>97% by SDS-PAGE and HPLC analyses
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by the dose-dependent induction of choline acetyl transferase activity in rat basal forebrain primary septal cell cultures is less than 50 ng/ml, corresponding to a specific activity of >2.0 × 10 <sup>4</sup> IU/mg.
<b>Formulation</b>	Sterile filtered white lyophilized powder. Purified and tested for use in cell culture.
<b>Storage/Handling</b>	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage. The reconstituted sample can be apportioned into working aliquots and stored at -80 °C for up to 6 months. Avoid repeated freeze/thaw cycles.
<b>Reconstitution</b>	The sample should be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a siliconized tube using PBS that contains a 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Reconstituted solutions are stable for up to one week at 2-8°C. Stock solutions should be aliquoted and stored at -80°C. Further dilutions should be made in appropriate buffered solutions containing BSA or serum.