

Overview

Synonyms	Neurotrophin-4, Neurotrophic 4/5 (NT-4/NT-5)
Description	<p>Neurotrophin-4 (NT-4) is a small secreted cytokine, and belongs to the Neurotrophin (NT) family, which also includes Brain Derived Neurotrophic Factor (BDNF), Nerve Growth Factor (NGF), and NT-3. NT family members are all derived from similar sized protein precursors, composed of N-terminal propeptides and C-terminal mature domains, which are separated by posttranslational proteolytic cleavage. NT-4 (along with NT-3) is found in the brains of mammals. <i>In vivo</i>, NT-4 binds to the common receptor, p75^{NTR}, and a tyrosine kinase receptor, TrkB. The heterotrimeric complex activates the NF^κB transcription factor. NT-4 is essential for the differentiation and wiring regulation of the central and peripheral nervous systems during development, and is related to important diseases including Alzheimer's.</p> <p>Recombinant mouse Neurotrophin-4 (rmNT-4) produced in <i>E. coli</i> is a noncovalently linked homodimer containing two non-glycosylated polypeptide chains of 131 amino acids. A fully biologically active molecule, rmNT-4 has a molecular mass of 14.0 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.</p>
Accession No	Q80VU4
Species	Mouse
Source	<i>E. coli</i>
Biological Activity	ED ₅₀ <1 µg/mL, measured by a cell proliferation assay using C6 cells, corresponding to a specific activity of >1 × 10 ³ units/mg.
Sequence	<p>MGVSETAPAS RRGELAVCDA VSGWVTDRTT AVDLRGREVE</p> <p>VLGEVPAAGG SPLRQYFFET RCKAESAGEG GPGVGGGGCR</p> <p>GVDRRHWSLE CKAKQSYVRA LTADSQGRVG WRWIRIDTAC</p> <p>VCTLLSRTGR A</p>

Properties

Measured Molecular Weight	14.0 kDa, observed by reducing SDS-PAGE.
Purity	> 95% by SDS-PAGE analysis.
Formulation	Lyophilized after extensive dialysis against 50mM acetic acid.
Reconstitution	Reconstituted in 50mM acetic acid or ddH ₂ O at 100 µg/mL.
Endotoxin Level	< 0.2 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant mouse Neurotrophin-4 (rmNT-4) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rmNT-4 remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.
Note	For research use only

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