Overview

Synonyms	Neurotrophin-4, Neurotrophic 4/5 (NT-4/NT-5)
Description	**Neurotrophin-4 (NT-4)**, also known as NT-5, is a neurotrophic factor structurally related to ² -NGF, BDNF, and NT-3. Human NT-4 shares 48 - 52% aa sequence identity with human ² -NGF, BDNF, and NT-3.Neurotrophins have six conserved cysteine residues that are involved in the formation of three disulfide bonds. NT-4 is expressed highest levels in prostate, lower levels in thymus, placenta, and skeletal muscle. NT-4 binds and induces receptor dimerization and activation of TrkB. NT-4 can signal through TrkB receptors and promotes the survival of peripheral sensory sympathetic neurons. Recombinant **human Neurotrophin-4 (rhNT-4)** produced in *E.coli* is a noncovalently linked homodimer containing two non-glycosylated polypeptide chains of 131 amino acids. A fully biologically active molecule, rhNT-4 has a molecular mass of 28.1kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques.
Species	Human
Source	*E. coli*
Biological Activity	ED_{50} < 5.0 µg/ml, measured by a cell proliferation assay using C6 cells, corresponding to a specific activity of > 2.0× 10^2 units/mg.
Sequence	MGVSETAPAS RRGELAVCDA VSGWVTDRRT AVDLRGREVE VLGEVPAAGG SPLRQYFFET RCKADNAEEG GPGAGGGGCR GVDRRHWVSE CKAKQSYVRA LTADAQGRVG WRWIRIDTAC VCTLLSRTGR A

Properties

Measured Molecular Weight	28.1 kDa, a noncovalently linked homodimer,of two 14.0 kDa polypeptide monomers.
Purity	> 95% by SDS-PAGE and HPLC analyses.
Formulation	Lyophilized after extensive dialysis against 50mM acetic acid.
Reconstitution	Reconstituted in 50mM acetic acid or ddH_2O at 50 µg/ml.
Endotoxin Level	< 0.3 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant **human Neurotrophin-4 (rhNT-4)** remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhNT-4 should be 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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