

# PRODUCT DATA SHEET



Bioworld Technology, Inc.

## Recombinant NT-4, Mouse

Catalog Number: BK0145-1mg

Source: Escherichia coli.

Quantity: 1mg

### Description:

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. In vivo, NT-4 binds to the common receptor, p75<sup>NTR</sup>, and a tyrosine kinase receptor, TrkB. The heterotrimeric complex activates the NF $\kappa$ B 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. Recombinant mouse Neurotrophin-4 (rmNT-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, rmNT-4 has a molecular mass of 14.0 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### Molecular Weight:

14.0 kDa, observed by reducing SDS-PAGE.

### Purity:

> 95% by SDS-PAGE analysis.

### Biological Activity:

ED<sub>50</sub> < 1  $\mu$ g/mL, measured by a cell proliferation assay using C6 cells, corresponding to a specific activity of > 1  $\times 10^3$  units/mg.

### Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

### Formulation:

Lyophilized after extensive dialysis against 50mM acetic acid.

### AA Sequence:

MGVSETAPASRRGELAVCDVSGWVTDRRTAV-  
DLRGREVEVLGEVPAAGGSPLRQYF-  
FETRCKAESAGEGG-  
PGVGGGGCRGVDRRHVLSECKAKQSYVRAL-  
TADSQGRVGRWIRIDTACVCTLLSRTGRA

### Endotoxin:

< 0.2 EU/ $\mu$ g, determined by LAL method.

### Reconstitution:

Reconstituted in 50mM acetic acid or ddH<sub>2</sub>O at 100  $\mu$ g/mL.

### Storage:

Lyophilized recombinant mouse Neurotrophin-4 (rmNT-4) remains stable up to 6 months at -80  $^{\circ}$ C from date of receipt. Upon reconstitution, rmNT-4 remains stable up to 2 weeks at 4  $^{\circ}$ C or up to 3 months at -20  $^{\circ}$ C.

### Usage:

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