

**BACKGROUND**

Neurotrophin-3 (NT-3) is an important member of the nerve growth factor (NGF) family of proteins behind BDNF and NGF. It is thought to promote the survival or differentiation of existing and new neurons in the central nervous system and synapses. These functions are thought to be communicated by TrkC, a receptor tyrosine kinase thought induce NT-3-specific signaling. In addition, NT-3 is thought to also bind TrkB and low affinity nerve growth factor receptor (LNGFR).

Recombinant mouse NT-3 is a non-glycosylated protein, containing 119 amino acids, with a molecular mass of 13.6 kDa.

**Alternative Names:**

Neurotrophin 3, Nerve growth factor 2 (NGF-2), HGNF, NT3

**Amino Acid Sequence:**

YAEHKSHRGE YSVCDSSESLW VTDKSSAIDI RGHQVTVLGE  
IKTGNSPVKQ YFYETRCKEA RPKNGCRGI DDKHWNSQCK  
TSQTYVRALT SENNLVGVWR WIRIDTSCVC ALSRKIGRT

**TECHNICAL INFORMATION**

**Source:** *E.coli*

**Physical Appearance:**

Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation:**

Recombinant mouse NT-3 is lyophilized from 0.02% TFA.

**Stability:**

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

**Protein Content and Purity determined by:**

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

**Endotoxin Level:**

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

**Biological Activity:**

The activity, as determined by the dose-dependent proliferation of BaF3 cells transfected with the TrkB receptor, is typically in the range of 1-10 ng/mL.

*Products are for research use only. They are not intended for human, animal, or diagnostic applications.*

