ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Human Neurotrophin-3 (NTF3/NT-3) Protein

Cat. # NT3-R02	Recombinant Human Purified Neurotrophin-3 protein	**SIZE**: 2 ug
Cat. # NT3-R10	Recombinant Human Purified Neurotrophin-3 protein	**SIZE**: 10 ug
Cat. # NT3-R100	Recombinant Human Purified Neurotrophin-3 protein	**SIZE**: 100 ug
Cat. # NT3-R1000	Recombinant Human Purified Neurotrophin-3 protein	**SIZE**: 1000 ug

Neurotrophin-3 is a protein that in humans is encoded by the NTF3 gene. The protein encoded by this gene, NT-3, is a neurotrophic factor in the NGF (Nerve Growth Factor) family of neurotrophins. It is a protein growth factor which has activity on certain neurons of the peripheral and central nervous system; it helps to support the survival and differentiation of existing neurons, and encourages the growth and differentiation of new neurons and synapses. NT-3 was the third neurotrophic factor to be characterized, after nerve growth factor (NGF) and BDNF (Brain Derived Neurotrophic Factor.

NT-3 binds three receptors on the surface of cells which are capable of responding to this growth factor:

TrkC (pronounced "Track C"), is apparently the "physiologic" receptor, in that it binds with greatest affinity to NT-3. However, NT-3 is capable of binding and signaling through a TrkC-related receptors called TrkB. Finally, NT-3 also binds a second-receptor type besides Trk receptors, called the LNGFR (for "low affinity nerve growth factor receptor).

Synonyms: Neurotrophic factor, nerve growth factor-2, NGF-2, HGNF, NT-3

Source of Protein

Human NTF-3/NT-3 (240-aa, 13.6 kda) was expressed in E. coli and purified (>95%). Human NTF-3 is a homodimer of two 13.6 kda monomers of 240-aa. Human and mouse NTF-3 are identical and high degree of sequence conservation on rat, pig, dog, chicken , hamster etc. Endotoxin level is <0.1 ng/ug protein or <1 EU/ug protein).

Purified protein is supplied in PBS, pH 7.4 or lyophilized in the same buffer (Lot sp concn is provided on the vial). Reconstitute protein in PBS or other buffers. We recommend using 0.1% BSA as a carrier protein to minimize protein loss and for stability.

Biological Activity

The ED_{50} was measured by the dose-dependent induction of choline acetyl transferase activity in rat basal forebrain primary septal cell cultures. It was found to be in the range of 25-50 ng/ml.

Storage: Deep freeze (-70 C). Avoid freeze/ thaw cycles. Avoid storage at +4C. This product is stable for 2 years as supplied.

General References:

Yancopoulos GD (1991) Genomics 10, 558-568; Maisonpierre P (1990) Science 247, 1446-1451; Lamballe F (1991) Cell 66, 967-979; Tessarollo L (1993) Development 118: 463–75

*This product is for In vitro research use only.

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