Active Recombinant Human Neurotrophin 3

Cat. No. NTF3-15H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human Neurotrophin-3 was expressed in modified*human 293 cells*.
Species	Human
Source	HEK293
Description	Neurotrophin-3 (NT-3), also known as nerve growth factor-2 (NGF2) or hippocampus-derived neurotrophic factor (HDNF), is a 257 amino acid precursor protein with a secretory signal sequence of 16 amino acids, a pro-peptide of 122 amino acids and a mature protein of 119 amino acids. NT-3 is found in neurons of the central nervous system and is secreted by many human gliomas. NT-3 is also expressed in muscles and its expression is downregulated in denervated muscles. NT-3 selectively supports the survival of certain neuronal cell populations, for example, cultured embryonic rat spinal motor neurons, enhances axon sprouting following adult spinal cord lesions and is involved in the regulation of developing neuromuscular synapses. NT-3 is a useful growth factor, differentiation factor and survival factor for cultured stem cells e.g. neural stem cells, cardiomyocytes and embryonic stem cells as well as various types of differentiated neural cells such as oligodendrocytes. NT-3 acts as a mitogen for cells of the neural crest in serum-free media.
Molecular Mass	NT-3 migrates at approximately 14-15 kDa in SDS-PAGE. This compares with the predicted molecular mass of 13.6 kDa.
pI	NT-3 separates into a number of isoforms with a pI from 6.6 to at least 10 in 2D

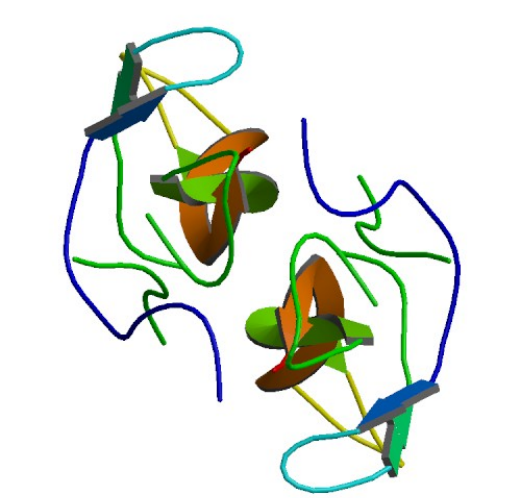
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	PAGE due to post-translational modifications. This compares with the unmodified NT-3 that has a predicted pI of 9.2.
Purity	>95%, as determined by SDS-PAGE and visualized by silver stain.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C.
Activity	The ED50 of NT-3 is typically 0.1-0.2 ng/ml as measured in a cell proliferation assay using a TrkB transfected PC12 cell line.
Theoretical Sequence	YAEH KSHRGEYS VCDSESLWVTDKSSAI DIRGHQVTVLGEIKTGNSPVKQYFYT RCKEARPVKNGCR GIDDKH WNSQC KTSQTYVRALTSENNKLVGWRWIRIDTSC VCALS RKIGRT.

GENE INFORMATION

Gene Name	NTF3 neurotrophin 3 [Homo sapiens]
Synonyms	neurotrophin 3; NT3; HDNF; NGF2; NGF-2; MGC129711; NTF3; NT-3; Nerve growth factor 2; Neurotrophic factor
Gene ID	4908
mRNA Refseq	NM_001102654

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Protein Refseq	NP_001096124
MIM	162660
UniProt ID	P20783
Chromosome Location	12p13
Pathway	Neurotrophin signaling pathway; MAPK signaling pathway
Function	growth factor activity; nerve growth factor binding; neurotrophin receptor binding
PDB rendering based on 1b8k.	

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