



Recombinant Human Neurturin

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FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	100-083S
Size:	5 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	4902
Synonyms:	NRTN; NTN

Neurturin is a disulfide-linked homodimer neurotrophic factor structurally related to GDNF, Artemin, and Persephin. These proteins belong to the cysteine-knot family of growth factors that assume stable dimeric structures. Neurturin signals through a multicomponent receptor system, composed of RET and one of four GFR α ($\alpha 1$ - $\alpha 4$) receptors. Neurturin promotes the development and survival of sympathetic and sensory neurons by signaling through a receptor system composed of RET and GFR $\alpha 2$. The functional form of human Neurturin is a disulfide-linked homodimer, of two 11.8 kDa polypeptide monomers (204 total amino acid residues). Each monomer contains seven conserved cysteine residues, one of which (Cys 69) is used for inter-chain disulfide bridging and the others are involved in intramolecular ring formation known as the cysteine knot configuration.

Sequence

ARLGARPCGL RELEVRVSEL GLGYASDETV LFRYCAGACE
AAARVYDLGL RRLRQRRRLR RERVRAQPC RPTAYEDEV
FLDAHSRYHT VHELARECA CV

Database References

Protein RefSeq:	NP_004549.1
Uniprot ID:	Q99748
mRNA RefSeq:	NM_004558.3.

Product Specifications

Expressed in	E. coli
Purity	> 98% by SDS-PAGE & HPLC analysis
Structural Information	disulphide-linked homodimer
Endotoxin level	< 0.1 ng /µg of protein (<1EU/µg).
Formulation	Lyophilized from 10 mM Sodium Citrate, pH 4.0
Length (aa):	204
MW:	11.8 kDa

Stability: The lyophilized protein is stable at room temperature for 1 month and at 4°C for 6 months. Reconstituted working aliquots are stable for 1 week at 2°C to 8°C and for 3 months at -20°C to -80°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. *Do not vortex.* This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Human Neurturin at a concentration of 100 ng/ml will support the survival of 65% of newborn rat sympathetic neurons.