

Human Artemin - Purified

Alternate names: ARTN, EVN, Enovin, Neublastin

Catalog No.: PA181

Quantity: 5 µg

Background: Artemin is a disulfide-linked homodimeric neurotrophic factor structurally related to GDNF, Artemin, Neurturin and Persephin. These proteins belong to the cysteine-knot superfamily of growth factors that assume stable dimeric protein structures. Artemin, GDNF, Persephin and Neurturin all signal through a multicomponent receptor system, composed of RET (receptor tyrosine kinase) and one of the four GFRalpha (alpha1-alpha4) receptors. Artemin prefers the receptor GFRalpha3-RET, but will use other receptors as an alternative. Artemin supports the survival of all peripheral ganglia such as sympathetic, neural crest and placodally derived sensory neurons, and dopaminergic midbrain neurons. The functional human Artemin ligand is a disulfide-linked homodimer, of two 12.0 kDa polypeptide monomers. Each monomer contains seven conserved cysteine residues, one of which is used for interchain disulfide bridging and the others are involved in intramolecular ring formation known as the cysteine knot configuration.

Uniprot ID: [Q5T4W7](#)

NCBI: [NP_001129687.1](#)

GeneID: [9048](#)

Species: Human

Source: E. coli, E.coli

Format: **State:** Lyophilized purified fraction (>98% pure by SDS-PAGE and HPLC analyses) without additives.
Purity: >98%
Endotoxin Level: < 0.1 ng per µg (1EU/µg)
Reconstitution: Restore in water to a concentration of 0.1-1.0 mg/ml. This solution can then be diluted into other aqueous buffers and stored at 2-8°C for 1 week or -20°C for future use.

Description: Recombinant human Artemin is a disulfide-linked homodimer formed by two identical 113 amino acid subunits.

AA Sequence:

AGGPGSRARA AGARGCRLRS QLVPVRLGL GHRSELVRF RFCSGSCRRA RSPHDLASLLS LLGAGALRPP
PGRSVPVSQPC CRPTRYEAVS FMDVNSTWRT VDRLSATAAG CLG.

Biological Activity: Determined by its ability to promote survival and neurite outgrowth and dorsal root ganglion neurons.

Molecular weight: 24.2 kDa

Add. Information: Centrifuge the vial prior to opening!

Storage:

Store the lyophilized protein at -20°C.
Reconstituted human Artemin should be stored in working aliquots with a carrier protein at -20°C.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Cass WA, Peters LE, Harned ME, Seroogy KB. Protection by GDNF and other trophic factors against the dopamine-depleting effects of neurotoxic doses of methamphetamine. *Ann N Y Acad Sci.* 2006 Aug;1074:272-81. PubMed PMID: 17105923.
2. Mikhail Paveliev GDNF family ligands activate multiple events during axonal growth in mature sensory neurons *Mol. Cell. Neuroscience*, 2004, Vol: 25 (3) pp. 453-459.