

Recombinant Human Artemin (rh Artemin)

Synonyms: ART, ARTN , EVN, NBN.

Introduction: The protein encoded by this gene is a member of the glial cell line-derived neurotrophic factor (GDNF) family of ligands which are a group of ligands within the TGF-beta superfamily of signaling molecules. GDNFs are unique in having neurotrophic properties and have potential use for gene therapy in neurodegenerative disease. Artemin has been shown in culture to support the survival of a number of peripheral neuron populations and at least one population of dopaminergic CNS neurons. Its role in the PNS and CNS is further substantiated by its expression pattern in the proximity of these neurons. Artemin is a ligand for the RET receptor and uses GFR-alpha 3 as a coreceptor. Four alternatively spliced transcripts have been described, two of which encode the same protein.

Description: Recombinant human Artemin produced in E.coli is a disulfide-linked homodimer, non-glycosylated polypeptide chain containing two identical 113 amino acids and having a total molecular mass of 24213 Dalton. The rh Artemin is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: lyophilized from a concentrated sterile solution containing 10 mM sodium citrate pH4.5 plus 25mM NaCl.

The aliquots of 1µg and 2 µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rh Artemin in sterile 18MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh Artemin although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity: Greater than 98.0% as determined by RP-HPLC and by SDS-PAGE.

Amino Acid Sequence: The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Gly-Pro-Gly-Gly.

Biological Activity: rh Artemin is fully biologically active when compared to standard. The ED₅₀ calculated by the dose-dependant proliferation assay SH-SY5Y cell line which was found to be 4-8ng/ml.

Endotoxicity: Less than 0.1 ng/µg (IEU/µg) of rh Artemin.

Protein content: Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value..
2. Analysis by RP-HPLC, using a standard solution of Artemin as a Reference Standard.

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<i>small</i>	2 µg	Cat.N°	11343772
<i>medium</i>	10 µg	Cat.N°	11343773

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