9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

Artemin Human

Artemin Human Recombinant
NTR0001

Product Overview

Name	Artemin Human
Description	
Artemin Human Recombinant	
Accession (Primary)	O95441
Synonyms	
ART, ARTN , EVN, NBN.	
Introduction	
The protein encoded by this gene is a member of the glial cell line-derived neurotophic 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 neurodegenrative disease. Artemin has been shown in culture to support the survival of a number of periferal 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. This protein 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.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	
Artemin was lyophilized after extensive dialysis against 10mM sodium citrate pH-4.5 and 25mM sodium chloride.	
Stability	
Lyophilized Artemin although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Artemin Human Recombinant should be stored at 4°C between 2-7 days and for future use 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: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.	
Amino acid sequence	

AGGPGSRARA AGARGCRLRS QLVPVRALGL GHRSDELVRF RFCSGSCRRA RSPHDLSLAS LLGAGALRPP PGSRPVSQPC CRPTRYEAVS FMDVNSTWRT VDRLSATACG CLG.

Biological Activity

The activity is determined by the dose-dependent proliferation of the SH-SY5Y cell line and is typically 4-8 ng/mL. The activity can also be determined by its ability to promote survival and neurite outgrowth.

Solubility

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

Background

Artemin Human Recombinant: Unraveling its Role in Neurobiology and Therapeutic Applications Abstract: Artemin, a member of the glial cell line-derived neurotrophic factor (GDNF) family, holds significant potential in neurobiology and therapeutic interventions. This research paper provides an overview of Artemin human recombinant, elucidating its molecular characteristics, signaling pathways, and therapeutic implications in neurological disorders. Understanding the multifaceted role of Artemin offers new avenues for targeted therapies. This article offers a concise analysis of Artemin, highlighting its impact on neurobiology and its therapeutic applications. Introduction: Neurological disorders represent a major challenge in healthcare, necessitating innovative therapeutic strategies. Artemin, a member of the GDNF family, has emerged as a promising molecule in neurobiology. This paper provides an overview of Artemin, shedding light on its structure, function, and therapeutic potential. Artemin Signaling and Mechanisms: Artemin binds to its receptor, Ret tyrosine kinase, and activates downstream signaling pathways, including the PI3K/AKT and MAPK pathways. These signaling cascades play crucial roles in neuronal survival, growth, and differentiation, highlighting the significance of Artemin in neurodevelopment and neuroprotection. Artemin in Neurological Disorders: Artemin has been implicated in various neurological disorders, including peripheral neuropathies and neurodegenerative diseases. Its neuroprotective properties and ability to enhance neuronal survival and regeneration make it a promising target for therapeutic interventions. Furthermore, Artemin may play a role in pain modulation and sensory neuron function. Therapeutic Potential of Artemin Human Recombinant: Artemin human recombinant offers promising prospects in the field of neurotherapeutics. Strategies aimed at modulating Artemin signaling or delivering exogenous Artemin hold potential for promoting neuronal survival, regeneration, and functional recovery. Artemin-based therapies could be developed for a range of neurological disorders, including peripheral neuropathies, Parkinson's disease, and spinal cord injuries. Challenges and Future Directions: While the therapeutic targeting of Artemin shows promise, several challenges lie ahead. Further research is needed to understand the precise mechanisms underlying Artemin's effects and its interactions with other signaling pathways. Additionally, the development of effective delivery methods and the identification of patient subgroups that may benefit from Artemin-based therapies are important considerations for clinical translation. Conclusion: Artemin human recombinant represents a promising avenue for therapeutic interventions in neurological disorders. Understanding the molecular mechanisms and functional implications of Artemin in neurobiology offers new opportunities for developing innovative treatments. Continued research in this field has the potential to improve the lives of individuals affected by neurological conditions

and advance the field of neurotherapeutics.

Precautions

Artemin Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (O95441)

Background

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