Mouse Artemin / ARTN Protein (Fc Tag)

Catalog Number: **50176-M01H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

neublastin

Protein Construction:

A DNA sequence encoding the mouse Artn (NP_033841.1) (Ala112-Gly224) was expressed with the Fc region of human IgG1 at the N-terminus.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE.

Bio Activity:

Immobilized GFR Alpha-3/GFRA3 Protein, Human, Recombinant (His Tag)(Cat:10213-H08H) at 2 μg/mL (100 μL/well) can bind Artemin Protein, Mouse, Recombinant (hFc Tag)(Cat:50176-M01H), the EC_{50} is 18-72 ng/mL.

Endotoxin:

< 1.0 EU per μg protein as determined by the LAL method.

Predicted N terminal: Glu

Molecular Mass:

The recombinant mouse Artn consists 373 amino acids and predicts a molecular mass of 40.6 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

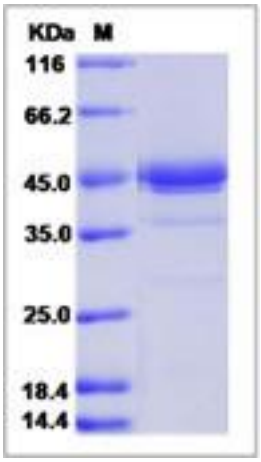
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Artemin (ARTN) is a member of glial cell line-derived neurotrophic factor (GDNF) family of ligands, and its signaling is mediated via a multi-component receptor complex including the glycosylphosphatidylinositol-anchored GDNF family receptors a (GFRa1, GFRa3) and RET receptor tyrosine kinase. The major mechanism of?ARTN?action is via binding to a non-signaling co-receptor. The major function of?ARTN?is to drive the molecule to induce migration and axonal projection from sympathetic neurons. It also promotes the survival, proliferation and neurite outgrowth of sympathetic neurons in vitro.?ARTN?triggers oncogenicity and metastasis by the activation of the AKT signaling pathway. Recent studies have reported that the expression of?ARTN?in hepatocellular carcinoma is associated with increased tumor size, quick relapse and shorter survival. Furthermore,?ARTN?promotes drug resistance such as antiestrogens, doxorubicin, fulvestrant, paclitaxel, tamoxifen and trastuzumab. Moreover,?ARTN?also stimulates the radio-therapeutic resistance. Hypoxia has been reported to regulate the cancer stem cell (CSC) population yet the underlying mechanism is poorly characterized. Artemin (ARTN) is a member of the glial cell derived neurotrophic factor family of ligands, is a hypoxia-responsive factor and is essential for hypoxia-induced CSC expansion in hepatocellular carcinoma (HCC). Clinically, elevated expression of ARTN in HCC was associated with larger tumor size, faster relapse and shorter survival. In vitro, HCC cells with forced expression of ARTN exhibited reduced apoptosis, increased proliferation, epithelial-mesenchymal transition (EMT) and enhanced motility. Additionally, ARTN dramatically increased xenograft tumor size and metastasis in vivo. Moreover, ARTN also enhanced tumorsphere formation and the tumor initiating capacity of HCC cells, consequent to expansion of the CD133+ CSC population. ARTN transcription was directly activated by hypoxia-induced factor-1α (HIF-1α) and hypoxia induced ARTN promoted EMT and increased the CSC population via AKT signaling.