Human MANF / ARMET Protein (His Tag)

Catalog Number: **11324-H08H**

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Biological Solution Specialist

General Information

Gene Name Synonym:

ARMET; ARP; 3230402M22Rik; AA407711; AA408789; AA673178; Armet; D17914; D18Mgi17

Protein Construction:

A DNA sequence encoding the human MANF (NP_006001.3) extracellular domain (Met 1-Leu 179) was expressed, with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 96 % as determined by SDS-PAGE

Endotoxin:

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

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Leu 22

Molecular Mass:

The recombinant human MANF consists of 169 amino acids and migrates as an approximately 20 kDa band in SDS-PAGE under reducing conditions as predicted.

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

Storage:

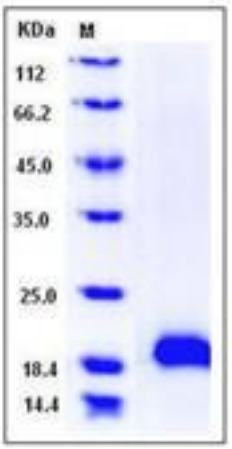
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Mesencephalic astrocyte-derived neurotrophic factor, also known as Protein ARMET, Arginine-rich protein, MANF and ARMET, is a secreted protein which belongs to the ARMET family. ARMET selectively promotes the survival of dopaminergic neurons of the ventral mid-brain. It modulates GABAergic transmission to the dopaminergic neurons of the substantia nigra. ARMET enhances spontaneous, as well as evoked, GABAergic inhibitory postsynaptic currents in dopaminergic neurons. ARMET inhibits cell proliferation and endoplasmic reticulum (ER) stress-induced cell death. The N-terminal region of ARMET may be responsible for neurotrophic activity while the C-terminal region may play a role in the ER stress response. MANF reduces endoplasmic reticulum (ER) stress and has neurotrophic effects on dopaminergic neurons. Intracortical delivery of recombinant MANF protein protects tissue from ischemic brain injury. MANF has been described as a survival factor for dopaminergic neurons. MANF expression was widespread in the nervous system and non-neuronal tissues. In the brain, relatively high MANF levels were detected in the cerebral cortex, hippocampus and cerebellar Purkinje cells. The widespread expression of MANF together with its evolutionary conserved nature and regulation by brain insults suggest that it has important functions both under normal and pathological conditions in many tissue types.

References

1.Shridhar V., et al., 1996, Oncogene 12:1931-1939.
2.Gevaert K., et al., 2003, Nat. Biotechnol. 21:566-569.
3.Petrova P., et al., 2003, J. Mol. Neurosci. 20:173-188.