Recombinant Mouse MANF/ARMET Protein (His Tag)

Catalog Number: PKSM040421

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description	
Species	Mouse
Source	HEK293 Cells-derived Mouse MANF/ARMET protein Met 1-Leu 179, with an C-
	terminal His
Calculated MW	19.6 kDa
Observed MW	21 kDa
Accession	NP_083379.2
Bio-activity	Not validated for activity
Properties	
Purity	>90% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80
	°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of
	reconstituted samples are stable at $< -20^{\circ}C$ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4
	Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants
	before lyophilization.
	Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.
Data	
	KDa M
	116
	66.2
	45.0
	35.0
	25.0
	18.4

> 90 % as determined by reducing SDS-PAGE.

Background

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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.