

ARMET/MANF Protein, Mouse (HEK293, His)

Cat. No.:	HY-P77296
Synonyms:	Mesencephalic astrocyte-derived neurotrophic factor; Arginine-rich protein; ARP
Species:	Mouse
Source:	HEK293
Accession:	Q3TMX5 (M1-L179)
Gene ID:	74840
Molecular Weight:	Approximately 21 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	ARMET/MANF protein is a vital regulator of dopaminergic neuron survival in the ventral mid-brain, while also modulating GABAergic transmission to dopaminergic neurons in the substantia nigra. It enhances both spontaneous and evoked GABAergic inhibitory postsynaptic currents in these neurons. Additionally, it inhibits cell proliferation and protects against cell death induced by ER stress. In normal conditions, ARMET/MANF protein is retained in the ER/sarcoplasmic reticulum through its association with the chaperone protein HSPA5. However, it is upregulated and secreted by the ER/SR in response to ER stress and hypoxia. Upon secretion, it directly binds to 3-O-sulfogalactosylceramide, a lipid sulfatide on the outer cell membrane of target cells, facilitating its uptake through endocytosis. This sulfatide binding is crucial for ARMET/MANF's role in alleviating ER stress and cell toxicity under hypoxic and ER stress conditions. ARMET/MANF protein also interacts with HSPA5 and is a component of a complex that includes CRELD2, MATN3, and PDIA4.
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Caution: Product has not been fully validated for medical applications. For research use only.

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