HB220418

Recombinant Mouse Mesencephalic Astrocyte-Derived Neurotrophic Factor (Mouse MANF)

Product Information

Product Name	Cat#	Size
Recombinant Mouse Mesencephalic Astrocyte-Derived Neurotrophic Factor (Mouse MANF)	92120ES08	5 μg
	92120ES60	100 μg
	92120ES76	500 μg

Product Description

Mesencephalic astrocyte-derived neurotrophic factor (MANF), also known as arginine-rich, mutated in early stage tumors (ARMET) and arginine-rich protein (ARP), is a 20 kDa member of the ARMET family of proteins. The name ARMET comes from the fact that the protein was initially thought to be 50 aa longer at the N-terminus and to contain an arginine-rich region. The presence of a specific mutation changing the previously numbered codon 50 from ATG to AGG, or deletion of that codon, has been reported in a variety of solid tumors. Human MANF is synthesized as a 179 amino acid (aa) precursor that contains a 21 aa signal sequence and a 158 aa mature chain. Mature human MANF is 99%, 98% and 96% aa identical to mature rat, mouse and bovine MANF, respectively. MANF is localized to the endoplasmic reticulum (ER) and Golgi apparatus, and is also secreted. In the CNS, MANF selectively protects nigral dopaminergic neurons, versus GABAergic or serotonergic neurons, which suggests that MANF may be indicated for the treatment of Parkinson's disease. MANF is also one of the 12 commonly unfolded protein response (UPR)-up-regulated genes. One study showed that MANF plays an important role in protecting cells against tunicamycin and thapsigargin-induced cell death. Loss of MANF renders cells more susceptible to those drugs, but also increases cell proliferation and decreases cell size. Another study showed that MANF is an endoplasmic reticulum stress response (ERSR) gene in the heart that can be induced and secreted in response to ER stresses, including ischemia, and that extracellular MANF may protect cardiac myocytes in an autocrine and paracrine manner.

Product Properties

Synonyms	mutated in early stage tumors, ARMET, ARP, MANF, mesencephalic astrocyte-derived neurotrophic factor, Protein ARMET
Accession	Q9CXI5
Unigene	Mm.29778.
Source	E.coli-derived mouse MANF protein, Leu22-Leu179.
Molecular Weight	Approximately 18.2 kDa.
AA Sequence	LRPGDCEVCI SYLGRFYQDL KDRDVTFSPA TIEEELIKFC REARGKENRL CYYIGATDDA ATKIINEVSK PLAHHIPVEK ICEKLKKKDS QICELKYDNQ IDLSTVDLKK LRVKELKKIL DDWGEMCKGC AEKSDYIRKI NELMPKYAPK AASARTDL
Tag	None
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	>98% by SDS-PAGE and HPLC analyses.
Biological Activity	The ED_{50} as determined by a cell proliferation assay using rat C6 cells is less than 10 μg/mL, corresponding to a specific activity of > 100 IU/mg. Fully biologically active when compared to standard.
Endotoxin	< 0.1 EU per 1μg of the protein by the LAL method.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20℃. Further dilutions should be made in appropriate buffered solutions.

Shipping and Storage

The products are shipped with ice pack and can be stored at -20℃ to -80℃ for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

Cautions

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only!