

Recombinant Human Mesencephalic Astrocyte-Derived Neurotrophic Factor

Information

Gene ID	7873
Accession #	P55145
Alternate Names	ARMET
Source	Escherichia coli.
M.Wt	Approximately 18.2 kDa, a single non-glycosylated polypeptide chain containing 158 amino acids.
AA Sequence	LRPGDCEVCI SYLGRFYQDL KDRDVTFSPTIENELIKFC REARGKENRL CYYIGATDDA ATKIINEVSK PLAAHIPVEK ICEKLKKKDS QICELKYDKQ IDLSTVDLKK LRVKELKKIL DDWGETCKGC AEKSDYIRKI NELMPKYAPK AASARTDL
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
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 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Fully biologically active when compared to standard. The ED as determined by a cell proliferation assay using rat C6 cells is less than 20 µg/ml, corresponding to a specific activity of > 50 IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	5µg	100µg	500µg
Recombinant Human Mesencephalic Astrocyte-Derived Neurotrophic Factor	5µg	100µg	500µg

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- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuMANF as determined by LAL method.

Description

MANF is a secreted neurotrophic factor that is expressed in brain, neuronal and certain non-neuronal tissues. It has been shown to promote survival, growth and function of dopamine specific neurons. MANF and its structural homolog CDFN, each contain an N-terminal saposin-like lipid binding domain, and a carboxyl-terminal domain, which is not homologous to previously characterized protein structures. MANF and CDFN can prevent 6-OHDA induced degeneration of dopaminergic neurons by triggering survival pathways in a rat experimental model of Parkinson disease. Mature human MANF is 99 %, 98 % and 96 % a.a. identical to mature rat, mouse and bovine MANF respectively.

Reference

1. Petrova P, Raibekas A, Pevsner J, et al. 2003. J Mol Neurosci. 20:173-88
2. Airavaara M, Chiocco MJ, Howard DB, et al. 2010. Exp Neurol. 225:104-13
3. Lindholm P, Peranen J, Andressoo JO, et al. 2008. Mol Cell Neurosci. 39:356-71.

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