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ARP Polyclonal Antibody

Catalog # AP73492

Product Information

Application	WB, IHC-P
Primary Accession	P55145
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	20700

Additional Information

Gene ID	7873
Other Names	MANF; ARMET; ARP; Mesencephalic astrocyte-derived neurotrophic factor; Arginine-rich protein; Protein ARMET
Dilution	WB~~Western Blot: 1/500 - 1/2000. IHC-p: 1/100-1/300. ELISA: 1/20000. Not yet tested in other applications. IHC-P~~Western Blot: 1/500 - 1/2000. IHC-p: 1/100-1/300. ELISA: 1/20000. Not yet tested in other applications.
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

Name	MANF (HGNC:15461)
Synonyms	ARMET, ARP
Function	Selectively promotes the survival of dopaminergic neurons of the ventral mid-brain (PubMed:12794311). Modulates GABAergic transmission to the dopaminergic neurons of the substantia nigra (By similarity). Enhances spontaneous, as well as evoked, GABAergic inhibitory postsynaptic currents in dopaminergic neurons (By similarity). Inhibits cell proliferation and endoplasmic reticulum (ER) stress-induced cell death (PubMed:18561914, PubMed:22637475, PubMed:29497057, PubMed:36739529). Retained in the ER/sarcoplasmic reticulum (SR) through association with the endoplasmic reticulum chaperone protein HSPA5 under normal conditions (PubMed:22637475). Stabilizes HSPA5/BiP in its substrate-bound ADP state, which facilitates HSPA5/BiP incorporation into chaperone-client complexes during endoplasmic reticulum stress, its interaction with HSPA5/BiP inhibits ATP binding to HSPA5/BiP and subsequent nucleotide exchange (By similarity). As a result acts as a repressor of the unfolded protein response

(UPR) pathway (By similarity). Up-regulated and secreted by the ER/SR in response to ER stress and hypoxia (PubMed:22637475). Following secretion by the ER/SR, directly binds to 3-O-sulfogalactosylceramide, a lipid sulfatide in the outer cell membrane of target cells (PubMed:29497057). Sulfatide binding promotes its cellular uptake by endocytosis, and is required for its role in alleviating ER stress and cell toxicity under hypoxic and ER stress conditions (PubMed:29497057). Essential for embryonic lung development (By similarity). Required for the correct postnatal temporal and structural development of splenic white pulp (By similarity). Required for the repair-associated myeloid response in skeletal muscle, acts as a regulator of phenotypic transition towards prorepair macrophages in response to muscle injury and as a result limits excessive proinflammatory signaling (By similarity). Represses RELA expression and therefore NF-kB signaling in the myocardium, as a result limits macrophage infiltration of injured tissue and M1 macrophage differentiation in response to myocardial injury (By similarity). Required for endochondral ossification in long bones and the skull during postnatal development (By similarity).

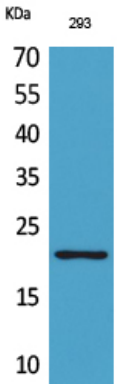
Cellular Location

Secreted. Endoplasmic reticulum lumen. Sarcoplasmic reticulum lumen. Note=Retained in the endoplasmic reticulum (ER), and sarcoplasmic reticulum (SR) under normal conditions (PubMed:22637475). Up-regulated and secreted by the ER/SR in response to ER stress and hypoxia (PubMed:22637475, PubMed:29497057)

Background

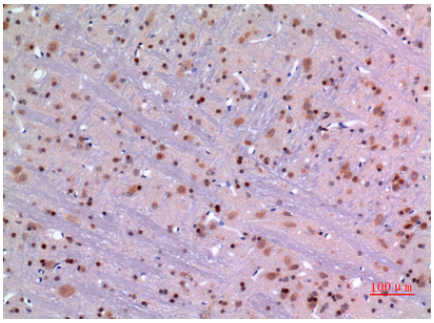
Selectively promotes the survival of dopaminergic neurons of the ventral mid-brain (PubMed: 12794311). Modulates GABAergic transmission to the dopaminergic neurons of the substantia nigra (By similarity). Enhances spontaneous, as well as evoked, GABAergic inhibitory postsynaptic currents in dopaminergic neurons (By similarity). Inhibits cell proliferation and endoplasmic reticulum (ER) stress-induced cell death (PubMed:18561914, PubMed:22637475, PubMed:29497057). Retained in the ER/sarcoplasmic reticulum (SR) through association with the endoplasmic reticulum chaperone protein HSPA5 under normal conditions (PubMed:22637475). Up-regulated and secreted by the ER/SR in response to ER stress and hypoxia (PubMed:22637475). Following secretion by the ER/SR, directly binds to 3-O- sulfogalactosylceramide, a lipid sulfatide in the outer cell membrane of target cells (PubMed:29497057). Sulfatide binding promotes its cellular uptake by endocytosis, and is required for its role in alleviating ER stress and cell toxicity under hypoxic and ER stress conditions (PubMed:29497057).

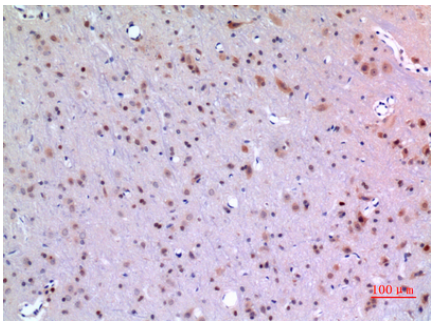
Images



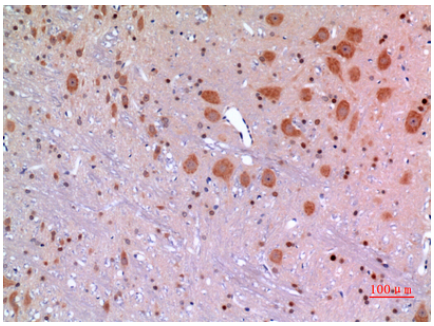
Western Blot analysis of 293 cells using ARP Polyclonal Antibody.. Secondary antibody was diluted at 1:20000

Immunohistochemical analysis of paraffin-embedded rat-brain, antibody was diluted at 1:100

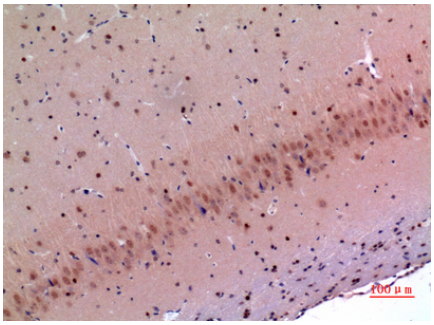




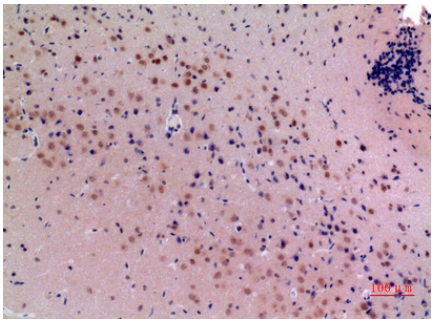
Immunohistochemical analysis of paraffin-embedded rat-brain, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded rat-brain, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded mouse-brain, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded mouse-brain, antibody was diluted at 1:100