

**MANF Antibody**  
Catalog # ASC10590

**Specification**

**MANF Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">P55145</a>
Other Accession	<a href="#">P55145</a> , <a href="#">23503040</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	20 kDa KDa
Application Notes	MANF antibody can be used for detection of MANF by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.

**MANF Antibody - Additional Information**

Gene ID **7873**

**Target/Specificity**

ARMET; This antibody does not cross-react with CDNF.

**Reconstitution & Storage**

MANF antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

MANF Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**MANF Antibody - Protein Information**

Name MANF ([HGNC:15461](#))

Synonyms ARMET, ARP

**Function**

Selectively promotes the survival of dopaminergic neurons of the ventral mid-brain (PubMed:[12794311](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/18561914)), PubMed:[22637475](http://www.uniprot.org/citations/22637475)

target="\_blank">22637475</a>, PubMed:<a href="http://www.uniprot.org/citations/29497057" target="\_blank">29497057</a>). Retained in the ER/sarcoplasmic reticulum (SR) through association with the endoplasmic reticulum chaperone protein HSPA5 under normal conditions (PubMed:<a href="http://www.uniprot.org/citations/22637475" target="\_blank">22637475</a>). Up-regulated and secreted by the ER/SR in response to ER stress and hypoxia (PubMed:<a href="http://www.uniprot.org/citations/22637475" target="\_blank">22637475</a>). Following secretion by the ER/SR, directly binds to 3-O-sulfogalactosylceramide, a lipid sulfatide in the outer cell membrane of target cells (PubMed:<a href="http://www.uniprot.org/citations/29497057" target="\_blank">29497057</a>). 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:<a href="http://www.uniprot.org/citations/29497057" target="\_blank">29497057</a>).

### Cellular Location

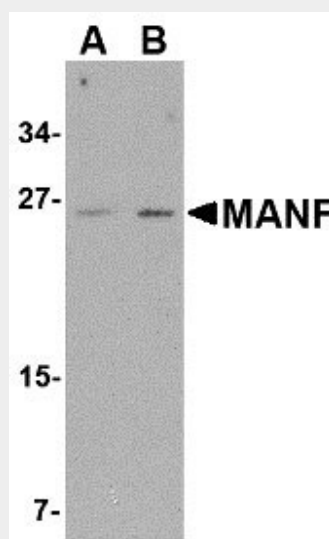
Secreted. Endoplasmic reticulum lumen. Sarcoplasmic reticulum lumen. Note=Retained in the endoplasmic reticulum (ER), and sarcoplasmic reticulum (SR) under normal conditions (PubMed:22637475). Up-regulated and secreted by the ER/SR in response to ER stress and hypoxia (PubMed:22637475, PubMed:29497057)

### MANF Antibody - Protocols

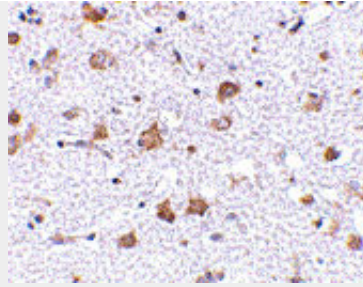
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

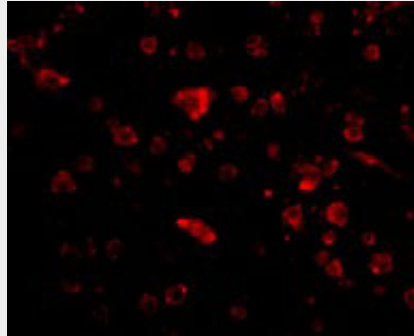
### MANF Antibody - Images



Western blot analysis of MANF in mouse brain tissue lysate with MANF antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of MANF in human brain tissue with MANF antibody at 2.5 µg/mL.



Immunofluorescence of MANF in Human Brain cells with MANF antibody at 20 µg/mL.

### **MANF Antibody - Background**

MANF Antibody: MANF, also known as ARMET, was initially identified as a protein containing an arginine-rich region that was highly mutated in a variety of tumors. More recently it was identified as a mesencephalic astrocyte-derived neurotrophic factor with selectivity for dopaminergic neurons, similar to glial cell line-derived neurotrophic factor (GDNF) and CDFN. In rat brain slices, MANF enhanced nigral gamma-aminobutyric acid release. Like GDNF and CDFN, MANF has selective neuroprotective activity for dopaminergic neurons suggesting that it may be indicated for the treatment of Parkinson's disease. Expression of MANF has also been shown to be induced during ER stress, suggesting that it may play a role in protein quality control during ER stress.

### **MANF Antibody - References**

- Shridhar V, Rivard S, Shridhar R, et al. A gene from human chromosomal band 3p21.1 encodes a highly conserved arginine-rich protein and is mutated in renal cell carcinomas. *Oncogene*1996; 12:1931-9.
- Shridhar R, Shridhar V, Rivard S, et al. Mutations in the arginine-rich protein gene, in lung, breast, and prostate cancers, and in squamous cell carcinoma of the head and neck. *Cancer Res.*1996; 56:5576-8.
- Petrova P, Raibekas A, Pevsner J, et al. MANF: a new mesencephalic, astrocyte-derived neurotrophic factor with selectivity for dopaminergic neurons. *J. Mol. Neurosci.*2003; 20:173-88.
- Lindholm P, Voutilainen MH, Lauren J, et al. Novel neurotrophic factor CDFN protects and rescues midbrain dopamine neurons in vivo. *Nature*2007; 448:73-7.