

Anti-Microtubule Associated Protein 2 (MAP2) Antibody



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Antibodies that work™

Catalog #: 1098-MAP2
Isotype: IgG1

Size: 100 µl
Clone: 4H5

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Cite this Antibody: PhosphoSolutions Cat# 1098-MAP2, RRID:AB_2810837

Host	Applications	Species Tested	Species Reactivity*	Molecular Reference
Mouse	WB 1:1000 ICC 1:1000 IHC 1:1000	B, H, M, R	Most Mammals	~280 kDa

Product Description: Mouse monoclonal antibody.

Biological Significance: Microtubules are 25nm diameter protein rods found in most kinds of eukaryotic cells. They are polymerized from a dimeric subunit made of one a subunit and one b tubulin subunit. Microtubules are associated with a family of proteins called microtubule associated proteins (MAPs), which includes the protein τ (tau) and a group of proteins referred to as MAP1, MAP2, MAP3, MAP4 and MAP5 (Kindler & Gardner 1994). MAP2 is made up of two ~280 kDa apparent molecular weight bands referred to as MAP2a and MAP2b. A third lower molecular weight form, usually called MAP2c, corresponds to a pair of protein bands running at ~70 kDa on SDS-PAGE gels. All these MAP2 forms are derived from a single gene by alternate transcription, and all share a C-terminal sequence which includes either three or four microtubule binding peptide sequences, which are very similar to those found in the related microtubule binding protein tau. MAP2 isoforms are expressed only in neuronal cells and specifically in the perikarya and dendrites of these cells. MAP2 has been recently shown to be the specific receptor for the neurosteroid pregnenolone (Fontaine-Lenore V. et al., 2006).

Antigen: Purified bovine MAP2

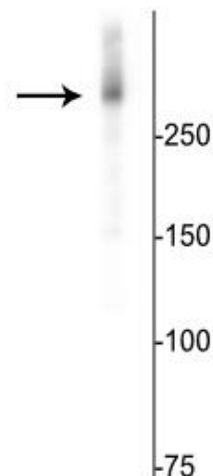
Antibody Specificity: Specific for endogenous levels of the ~280 kDa MAP2 protein.

Purification Method: Protein G purified culture supernatant

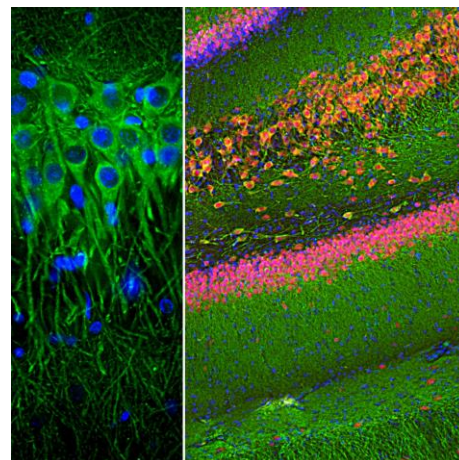
Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in PBS + 50% glycerol and 5 mM sodium azide.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of mouse cortical lysate showing specific immunolabeling of the ~280 kDa MAP2 protein.



Immunostaining of rat hippocampus showing specific labeling of neuronal dendrites and perikarya with Anti-Microtubule Associated Protein 2 in green, FOX3 in red and nuclei in blue.

General References:

Fontaine-Lenore V, Chambraud B, Fellous A, David S, Duchosoy Y, Baulieu EE, Robel P (2006) Microtubule-associated protein 2 (MAP2) is a neurosteroid. *Proc Natl Acad Sci USA* 103(12):4711-6.

Kindler S, Gardner CC (1994) Four repeat MAP2 isoforms in human and rat brain. *Brain Res Mol Brain Res.* 26(1-2):218-224.

Application Key: **WB** = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Species Reactivity Key: **All**-All Species **A**-Avian **Amp**-Amphibian **Ar**-*Arabidopsis* **B**-Bovine **C**-Canine **Ch**-Chicken **D**-*Drosophila*
GP-Guinea Pig **H**-Human **Ha**-Hamster **M**-Mouse **NHP**- Non-human primate **P**-Pig **R**-Rat **S**-Sheep **X**-*Xenopus* **Z**-Zebrafish

*Species assumed based on 100% homology with sequence used as antigen

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