

# Anti-Microtubule Associated Protein 2 (MAP2) Antibody



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**Catalog #:** 1099-MAP2

**Size:** 100 µl

**Cite this Antibody:** PhosphoSolutions Cat# 1099-MAP2, RRID:AB\_2752241

Host	Applications	Species Tested	Species Reactivity*	Molecular Weight
Goat	WB 1:1,000 ICC 1:1000-1:2000 IHC 1:1000-1:2000	H, M, R		~280 kDa

**Product Description:** Goat polyclonal 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  $\tau$  (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  $\tau$  (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:** Recombinant human MAP2 expressed in and purified from *E. coli*.

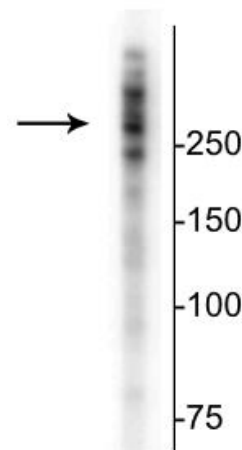
**Antibody Specificity:** Specific for endogenous levels of the ~280 kDa MAP2 protein.

**Purification Method:** Protein G purified

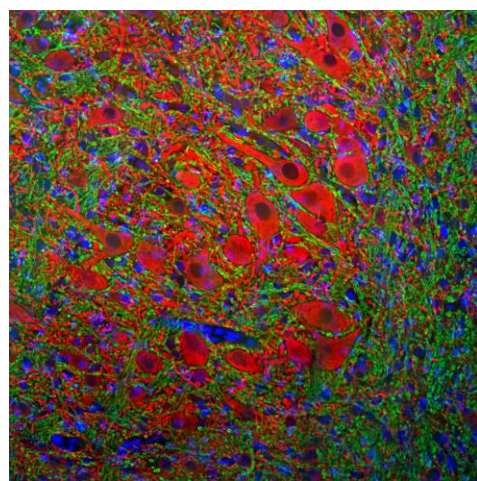
**Quality Control Tests:** Western blots performed on each lot.

**Packaging:** 100 µl liquid + 50% glycerol + 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 rat cortical lysate showing specific immunolabeling of the ~280 kDa MAP2 protein.



Immunostaining of rat brain stem showing specific labeling of MAP2 (red, 1:2000) in the perikarya and dendrites of neurons and MBP (cat.# 1120-MBP, green, 1:5000). Cell nuclei are visualized with DAPI DNA stain.

## 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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