

For Research Use Only

# MAP2 Polyclonal antibody

Catalog Number: 17490-1-AP **316 Publications**



## Basic Information

|   |   |  |
|---|---|--|
| <b>Catalog Number:</b><br>17490-1-AP                          | <b>GenBank Accession Number:</b><br>BC038857          | <b>Purification Method:</b><br>Antigen affinity purification         |
| <b>Size:</b><br>150ul, Concentration: 1000 ug/ml by Nanodrop; | <b>GeneID (NCBI):</b><br>4133                         | <b>Recommended Dilutions:</b><br>WB: 1:5000-1:50000                  |
| <b>Source:</b><br>Rabbit                                      | <b>UNIPROT ID:</b><br>P11137                          | IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate                |
| <b>Isotype:</b><br>IgG  | <b>Full Name:</b><br>microtubule-associated protein 2 | IHC: 1:2500-1:10000  |
| <b>Immunogen Catalog Number:</b><br>AG11580                   | <b>Calculated MW:</b><br>200 kDa                      | IF-P: 1:50-1:500   |
|   | <b>Observed MW:</b><br>280 kDa, 70-85 kDa             | IF-Fro: 1:50-1:500   |
|   |   | IF/ICC: 1:125-1:500  |
|   |   | FC (Intra): 0.40 ug per 10 <sup>6</sup> cells in a 100 µl suspension |

## Applications

|   |   |
|---|---|
| <b>Tested Applications:</b><br>WB, IHC, IF/ICC, IF-P, IF-Fro, FC (Intra), IP, ELISA   | <b>Positive Controls:</b><br>WB : SH-SY5Y cells, rat brain tissue, mouse brain tissue |
| <b>Cited Applications:</b><br>WB, IHC, IF   | IP : SH-SY5Y cells, mouse brain tissue  |
| <b>Species Specificity:</b><br>human, mouse, rat  | IHC : mouse brain tissue,   |
| <b>Cited Species:</b><br>human, mouse, rat, monkey, goat  | IF-P : rat brain tissue, mouse brain tissue   |
| <b>Note-IHC:</b> suggested antigen retrieval with <b>TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0</b> | IF-Fro : mouse brain tissue, rat brain tissue   |
|   | IF/ICC : iPS cells,   |
|   | FC (Intra) : Neuro-2a cells,  |

## Background Information

MAP2 (microtubule-associated protein 2) is a cytoskeleton protein abundant in the brain and has an important role in neuronal morphogenesis. Multiple high MW and low MW MAP2 isoforms are expressed within the proximal segment of axons, dendrites, and cell bodies. The expression of MAP2 is regulated in both a tissue- and developmentally-specific manner. The 280 kDa MAP2B is present throughout rat brain development, and the slightly larger MAP2A appears first during the end of the second week of postnatal life. MAP2C, composed of several bands of about 70 kDa, is present during early brain development and largely disappears from the mature brain except for the retina, olfactory bulb, and cerebellum. In addition, some isoforms with lower MW around 50-60 kDa also exist. MAP2 antibodies have been widely used to mark the neuron or dendrite formation. This antibody can recognize both high MW and low MW isoforms of MAP2.

## Notable Publications

| Author      | Pubmed ID | Journal           | Application |
|-------------|-----------|-------------------|-------------|
| Ji-Qiang Fu | 30264483  | CNS Neurosci Ther | IF          |
| Minghao Yao | 31355388  | Biomater Sci      | WB          |
| Yunfei Chen | 32966240  | Aging (Albany NY) | IF          |

## Storage

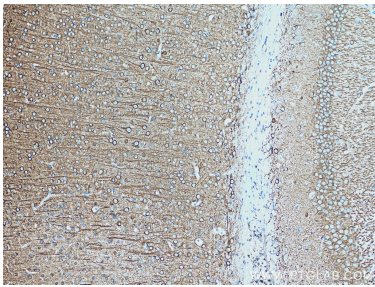
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol, pH7.3  
Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

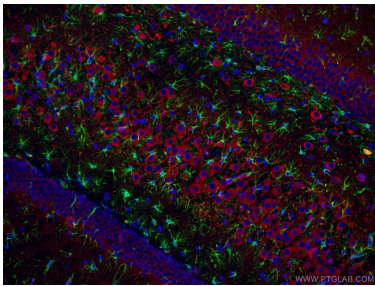
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
E: proteintech@ptglab.com  
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

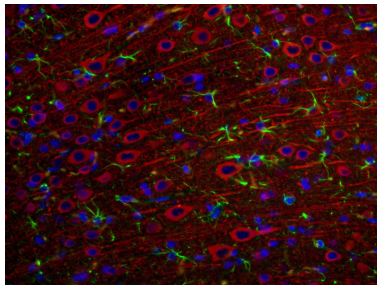
Selected Validation Data



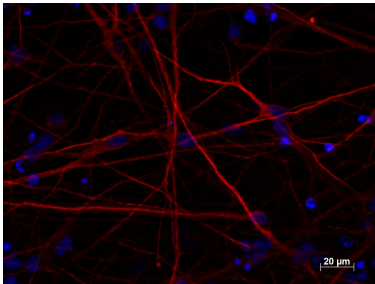
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 17490-1-AP (MAP2 antibody) at dilution of 1:5000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



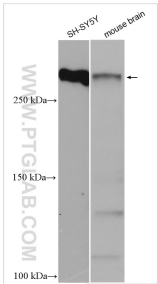
Immunofluorescent analysis of (4% PFA) fixed rat brain tissue using 17490-1-AP (MAP2 antibody) at dilution of 1:100 and CoraLite594-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L). The section was co-stained with 60190-1-Ig (GFAP antibody, green).



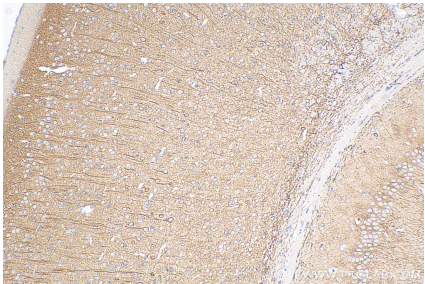
Immunofluorescent analysis of (4% PFA) fixed rat brain tissue using 17490-1-AP (MAP2 antibody) at dilution of 1:100 and CoraLite594-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L). The section was co-stained with 60190-1-Ig (GFAP antibody, green).



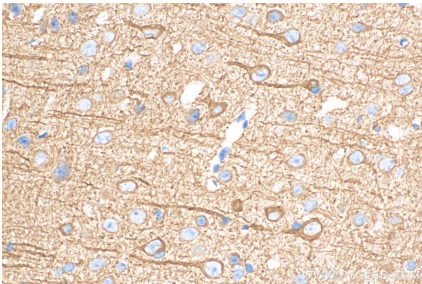
Immunofluorescent staining of MAP2 (17490-1-AP, 1:250 dilution) with 4% PFA fixed control hiPSC derived neuronal cultures (35 days old). (RED MAP2; Blue: DAPI). Provided by BioTalentum Ltd., Hungary.



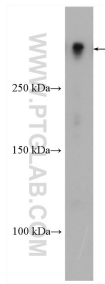
Various lysates were subjected to SDS PAGE followed by western blot with 17490-1-AP (MAP2 antibody) at dilution of 1:30000 incubated at room temperature for 1.5 hours.



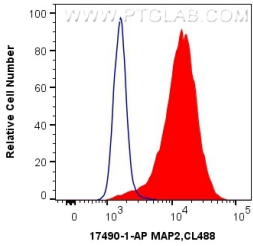
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 17490-1-AP (MAP2 antibody) at dilution of 1:5000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



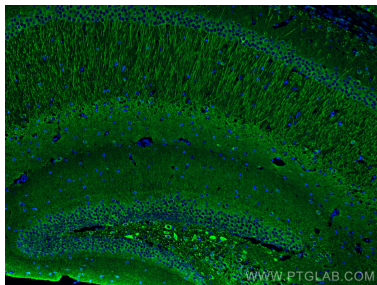
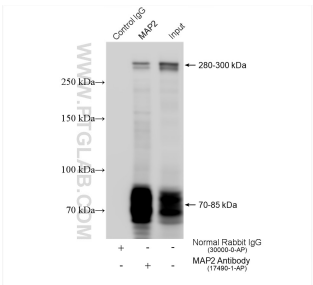
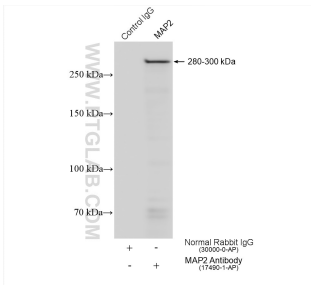
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 17490-1-AP (MAP2 antibody) at dilution of 1:5000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



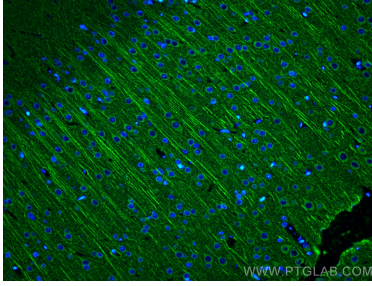
rat brain tissue were subjected to SDS PAGE followed by western blot with 17490-1-AP (MAP2 antibody) at dilution of 1:30000 incubated at room temperature for 1.5 hours.



1X10<sup>6</sup> Neuro-2a cells were intracellularly stained with 0.4 ug Anti-Human MAP2 (17490-1-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).

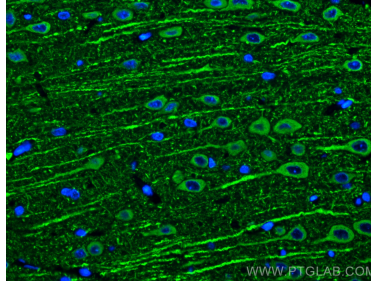


IP result of anti-MAP2 (IP:17490-1-AP, 4ug;  
Detection:17490-1-AP 1:8000) with mouse brain  
tissue lysate 1280 ug.



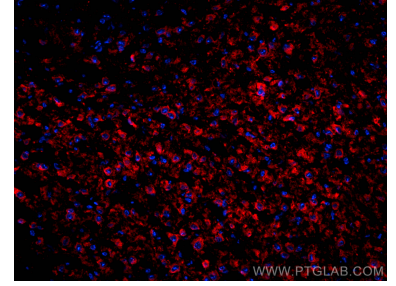
Immunofluorescent analysis of (4% PFA) fixed rat  
brain tissue using MAP2 antibody (17490-1-AP) at  
dilution of 1:200 and CoraLite®488-Conjugated  
AffiniPure Goat Anti-Rabbit IgG(H+L).

IP result of anti-MAP2 (IP:17490-1-AP, 4ug;  
Detection:17490-1-AP 1:10000) with SH-SY5Y cells  
lysate 1240 ug.

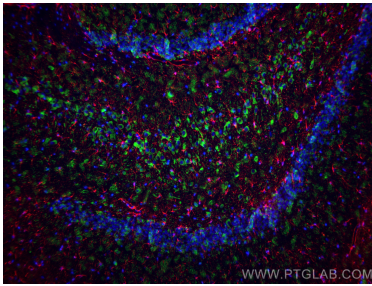


Immunofluorescent analysis of (4% PFA) fixed rat  
brain tissue using MAP2 antibody (17490-1-AP) at  
dilution of 1:200 and CoraLite®488-Conjugated  
AffiniPure Goat Anti-Rabbit IgG(H+L).

Immunofluorescent analysis of (4% PFA) fixed  
mouse brain tissue using MAP2 antibody (17490-1-  
AP) at dilution of 1:200 and CoraLite®488-  
Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



Immunofluorescent analysis of (4% PFA) fixed  
frozen OCT-embedded mouse brain tissue using  
MAP2 antibody (17490-1-AP) at dilution of 1:200  
and CoraLite®594-Conjugated AffiniPure Goat  
Anti-Rabbit IgG(H+L) (SA00013-4).



Immunofluorescent analysis of (4% PFA) fixed  
frozen OCT-embedded rat brain tissue using MAP2  
antibody (17490-1-AP) at dilution of 1:200 and  
CoraLite®488-Conjugated Goat Anti-Rabbit  
IgG(H+L) (SA00013-2), GFAP antibody (60190-1-Ig,  
Clone: 4B2E10, red).