Synaptic Systems

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MAP 2

Cat.No. 188 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Albumin and azide were added for stabilization. For **reconstitution** add 100 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	**WB**: 1 : 1000 (AP staining) (see remarks) **IP**: not tested yet **ICC**: 1 : 100 up to 1 : 500 **IHC**: 1 : 100 up to 1 : 200 **IHC-P/FFPE**: 1 : 500
Clone	198A5
Subtype	IgG1 (κ light chain)
Immunogen	Recombinant protein corresponding to AA 2 to 314 from human MAP2-4 hu (UniProt Id: P11137-4)
Epitop	Epitop: AA 82 to 96 from human MAP2-4 hu (UniProt Id: P11137-4)
Reactivity	Reacts with: human (P11137), rat (P15146), mouse (P20357). No signal: zebrafish. Other species not tested yet.
Specificity	Specific for MAP 2; recognizes all four isoforms.
Matching control	188-0P
Remarks	**WB**: Due to its large size, MAP 2 requires special gel-electrophoresis and Western blot protocols for visualization by immunoblotting. Excellent results can be obtained with the 4-12% TRIS-glycine gradient gels from anamed or NuPAGE 3-8% TRIS-Acetate gradient gels from invitrogen.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

There are two major classes of heat stable **m**icrotubule **a**ssociated **p**roteins (MAPs): **MAP 2**, and tau. Both protein classes are involved in the regulation of microtubule polymerization in cells. Four differentially regulated isoforms of MAP 2 have been described so far.

Selected References SYSY Antibodies

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Liu Y, Xue X, Zhang H, Che X, Luo J, Wang P, Xu J, Xing Z, Yuan L, Liu Y, Fu X, et al.
Autophagy (2018) : . . **WB; tested species: rat**

Up-regulation of neurofilament light chains is associated with diminished immunoreactivities for MAP2 and tau after ischemic stroke in rodents and in a human case.
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Journal of chemical neuroanatomy (2016) 78: 140-148. . **IHC**

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Genetic inactivation of mTORC1 or mTORC2 in neurons reveals distinct functions in glutamatergic synaptic transmission.
McCabe MP, Cullen ER, Barrows CM, Shore AN, Tooke KI, Laprade KA, Stafford JM, Weston MC
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Journal of neuroscience methods (2020) 334: 108548. . **ICC; tested species: human**

Lymphoblast-derived integration-free iPSC line AD-TREM2-1 from a 67year-old Alzheimer's disease patient expressing the TREM2 p.R47H variant.
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Mikhaylova M, Bär J, van Bommel B, Schätzle P, YuanXiang P, Raman R, Hradsky J, Konietzny A, Loktionov EY, Reddy PP, Lopez-Rojas J, et al.
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Moretti D, DiFrancesco ML, Sharma PP, Dante S, Albisetti E, Monticelli M, Bertacco R, Petti D, Baldelli P, Benfenati F
Frontiers in neuroscience (2018) 12: 909. . **ICC; tested species: rat**

Genetically Induced Retrograde Amnesia of Associative Memories After Neuroplastin Ablation.
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Biological psychiatry (2017) 812: 124-135. . **IHC**

PTEN Loss Increases the Connectivity of Fast Synaptic Motifs and Functional Connectivity in a Developing Hippocampal Network.
Barrows CM, McCabe MP, Chen H, Swann JW, Weston MC
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Human adipose-derived stem cells partially rescue the stroke syndromes by promoting spatial learning and memory in mouse middle cerebral artery occlusion model.
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Stem cell research & therapy (2015) 6: 92. . **IHC; tested species: mouse**

Brain extracellular matrix retains connectivity in neuronal networks.
Bikbaev A, Frischknecht R, Heine M
Scientific reports (2015) 5: 14527. . **ICC**

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