Revision 3

Store at -20C

#4542

MAP2 Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IF-F, IF-IC	H M R Mk	Endogenous	75, 82, 280	Rabbit	#P11137	4133

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Frozen)	1:50
Immunofluorescence (Immunocytochemistry)	1:400 - 1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

MAP2 Antibody detects endogenous levels of all isoforms of MAP2 total protein. This antibody does not cross-react with tau. Non-specific labeling of mouse pancreas, colon, small intestine, and liver may be observed by immunofluorescence.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to carboxy-terminal residues of human MAP2. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Microtubule-associated protein 2 (MAP2) is a neuronal phosphoprotein that regulates the structure and stability of microtubules, neuronal morphogenesis, cytoskeleton dynamics, and organelle trafficking in axons and dendrites (1). Multiple MAP2 isoforms are expressed in neurons, including high molecular weight MAP2A and MAP2B (280 and 270 kDa), and low molecular weight MAP2C and MAP2D (70 and 75 kDa). Phosphorylation of MAP2 modulates its association with the cytoskeleton and is developmentally regulated. GSK-3 and p44/42 MAP kinase phosphorylate MAP2 at Ser136, Thr1620, and Thr1623 (2,3). Phosphorylation at Thr1620/1623 by GSK-3 inhibits MAP2 association with microtubules and microtubule stability (3).

Background References

1. Sanchez, C. et al. (2000) *Prog. Neurobiol.* 61, 133-168.
2. Berling, B. et al. (1994) *Eur. J. Cell Biol.* 64, 120-130.
3. Sanchez, C. et al. (2000) *Eur. J. Cell Biol.* 79, 252-260.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IF-F:** Immunofluorescence (Frozen) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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Limited Uses

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