

ARG10720 anti-MAP2 antibody [2C4]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [2C4] recognizes MAP2
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-Fr, WB
Specificity	This antibody was made against a recombinant full length form of human MAP2D and was found to bind all four MAP2 gene products including MAP2a, MAP2b, MAP2c and MAP2d.
Host	Mouse
Clonality	Monoclonal
Clone	2C4
Isotype	IgG1
Target Name	MAP2
Species	Human
Immunogen	Full length recombinant Human MAP2D protein.
Conjugation	Un-conjugated
Alternate Names	MAP2A; Microtubule-associated protein 2; MAP2C; MAP2B; MAP-2

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:5000 - 1:10000
	IHC-Fr	1:5000 - 1:10000
	WB	1:5000 - 1:10000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Form	Liquid
Purification	Affinity purification.
Buffer	PBS and 50% Glycerol.
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

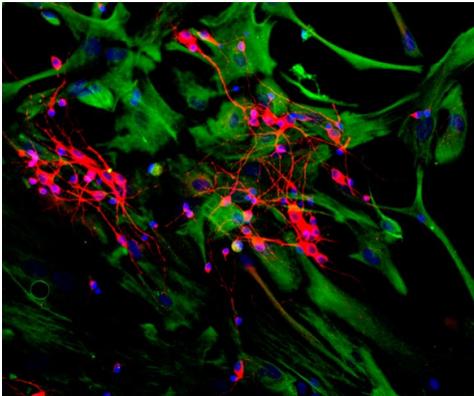
Note

For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

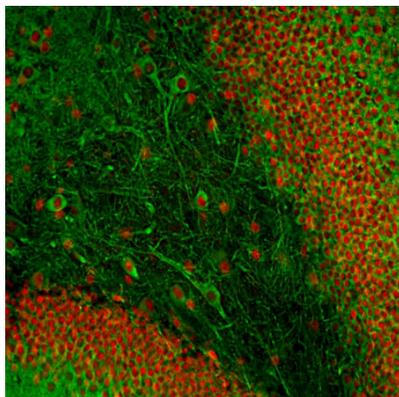
Gene Symbol	MAP2
Gene Full Name	microtubule-associated protein 2
Background	This gene encodes a protein that belongs to the microtubule-associated protein family. The proteins of this family are thought to be involved in microtubule assembly, which is an essential step in neurogenesis. The products of similar genes in rat and mouse are neuron-specific cytoskeletal proteins that are enriched in dendrites, implicating a role in determining and stabilizing dendritic shape during neuron development. A number of alternatively spliced variants encoding distinct isoforms have been described. [provided by RefSeq, Jan 2010]
Function	The exact function of MAP2 is unknown but MAPs may stabilize the microtubules against depolymerization. They also seem to have a stiffening effect on microtubules. [UniProt]
Highlight	Related products: MAP2 antibodies: MAP2 Duos / Panels: Anti-Mouse IgG secondary antibodies; Related news: Astrocyte-to-neuron conversion for Parkinson's disease treatment
Research Area	Controls and Markers antibody; Neuroscience antibody; Signaling Transduction antibody; Neuron Marker antibody; Mature Neuron Marker antibody; Neurite Marker antibody
Calculated Mw	200 kDa
PTM	Phosphorylated at serine residues in K-X-G-S motifs by MAP/microtubule affinity-regulating kinase (MARK1 or MARK2), causing detachment from microtubules, and their disassembly (By similarity). Isoform 2 is probably phosphorylated by PKA at Ser-323, Ser-354 and Ser-386 and by FYN at Tyr-67. The interaction with KNDC1 enhances MAP2 threonine phosphorylation (By similarity).

Images



ARG10720 anti-MAP2 antibody [2C4] ICC/IF image

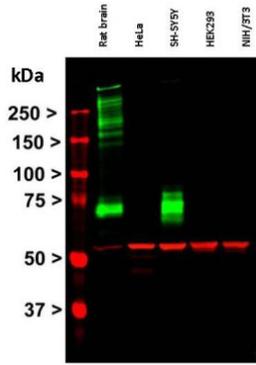
Immunocytochemistry: Rat mixed neuron and glia cultures stained with ARG10720 anti-MAP2 antibody [2C4] (red) and co-stained with chicken antibody to Vimentin (green); DNA (blue). ARG10720 anti-MAP2 antibody [2C4] antibody reveals strong cytoplasmic staining of dendrites and perikarya of neuronal cells, while vimentin was visualized in astrocytes and fibroblasts.



ARG10720 anti-MAP2 antibody [2C4] IHC-Fr image

Immunohistochemistry: Frozen section of Adult Rat hippocampus stained with ARG10720 anti-MAP2 antibody [2C4] (green) at 1:5000 dilution and Chicken pAb to FOX2 (red) at 1:2000 dilution. (Sample preparation: Following transcardial perfusion of Rat with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45 μ M, and free-floating sections were stained with above antibodies.)

Clone 2C4 labels all MAP2 protein isotypes expressed in neuronal perikarya and dendrites. The FOX2 antibody stains the nuclei of most neuronal cells.



ARG10720 anti-MAP2 antibody [2C4] WB image

Western blot: Rat whole brain, HeLa, SH-SY5Y, HEK293 and NIH/3T3 cell lysates stained with [ARG52468](#) anti-Vimentin antibody (red) at 1:5000 dilution.

The blot was simultaneously stained with ARG10720 anti-MAP2 antibody [2C4] (green) at 1:5000 dilution, revealing multiple bands around 280 kDa that correspond to full length MAP2a/b isoforms while the ~ 70 kDa bands are MAP2c/d isoforms. MAP2 isoforms are seen only in extracts containing neuronal lineage cells.