abcam

Product datasheet

Anti-MAP2 antibody - Neuronal Marker ab32454

★★★★★ **35 Abreviews**   **256 References**   7 Images

Overview

Product name	Anti-MAP2 antibody - Neuronal Marker
Description	Rabbit polyclonal to MAP2 - Neuronal Marker
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
	Predicted to work with: Goat, Cat, Lizard ⚠
Immunogen	Synthetic peptide within Rat MAP2 aa 1-100 (N terminal) conjugated to keyhole limpet haemocyanin. The exact sequence is proprietary. Database link: **P15146** (Peptide available as **ab32453**)
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee   Our **Abpromise guarantee** covers the use of ab32454 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P	★★★★★ (8)	Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB	★★★★★ (1)	Use at an assay dependent concentration. Predicted molecular weight: 199 kDa.Can be blocked with **Rat MAP2 peptide (ab32453)**.
ICC/IF	★★★★★ (11)	1/1000.

Target

| 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.
Sequence similarities	Contains 3 Tau/MAP repeats.
Post-translational modifications	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.
Cellular localization	Cytoplasm, cytoskeleton.

Images
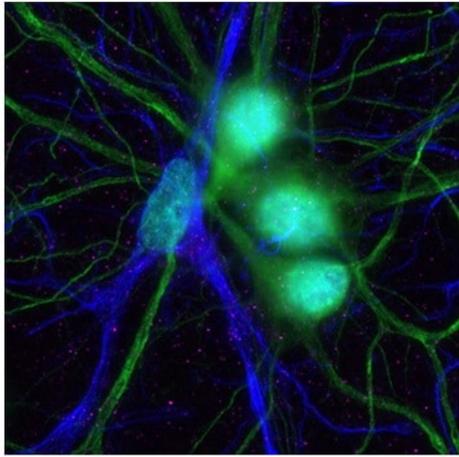
Immunocytochemistry/ Immunofluorescence - Anti-MAP2 antibody - Neuronal Marker (ab32454)

Müller A et al. Monitoring Astrocytic Proteome Dynamics by Cell Type-Specific Protein Labeling. PLoS One 10:e0145451 (2015).

Rat astrocytes (DIV 22) cells were fixed with 4% paraformaldehyde and stained for MAP2 (Green) using ab32454 at 1/1000 dilution in ICC/IF analysis.
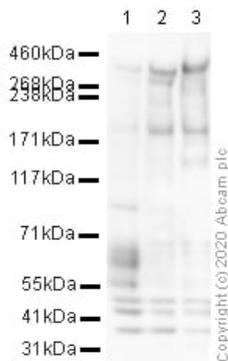
Western blot - Anti-MAP2 antibody - Neuronal Marker (ab32454)

All lanes : Anti-MAP2 antibody - Neuronal Marker (ab32454) at 1 µg/ml

Lane 1 : Mouse Brain (day 0) Tissue Lysate
Lane 2 : Mouse Brain Tissue Lysate
Lane 3 : Rat Brain Tissue Lysate

Lysates/proteins at 20 µg per lane.

Secondary
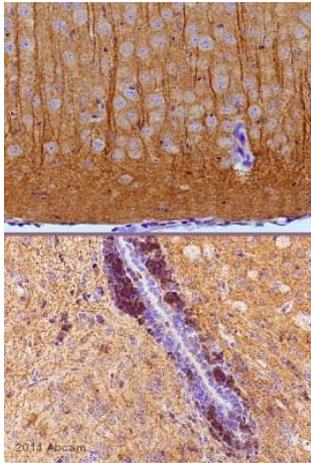**All lanes :** Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/50000 dilution

Predicted band size: 199 kDa
Observed band size: 268,280 kDa
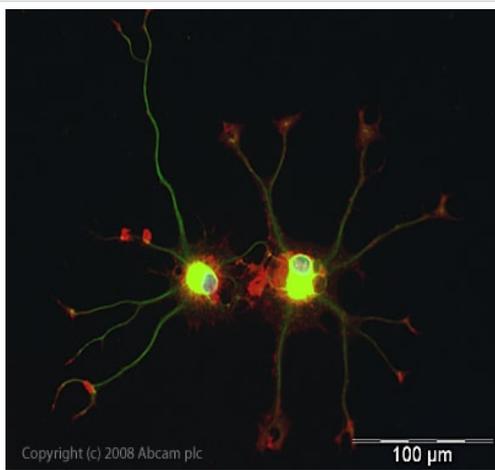
Exposure time: 2 minutes

Blocking buffer: 2% BSA

Gel type: TA

ab32454 staining MAP2 in mouse brain tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 1% BSA for 10 minutes at 21°C; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/3000 in blocking buffer) for 2 hours at 21°C in TBS/BSA/azide. An undiluted Biotin-conjugated goat anti-rabbit IgG polyclonal was used as the secondary antibody.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAP2 antibody - Neuronal Marker (ab32454)

This image is courtesy of an Abreview by Carl Hobbs.

ICC/IF image of ab32454 stained rat PC12 cells. The cells were PFA fixed (10 min), permabilised in PBS-T (20 min) and incubated with the antibody (ab32454, 1µg/ml) for 1h at room temperature. 1%BSA / 10% normal goat serum / 0.3M glycine was used to block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).

Immunocytochemistry/ Immunofluorescence - Anti-MAP2 antibody - Neuronal Marker (ab32454)

Western blot - Anti-MAP2 antibody - Neuronal
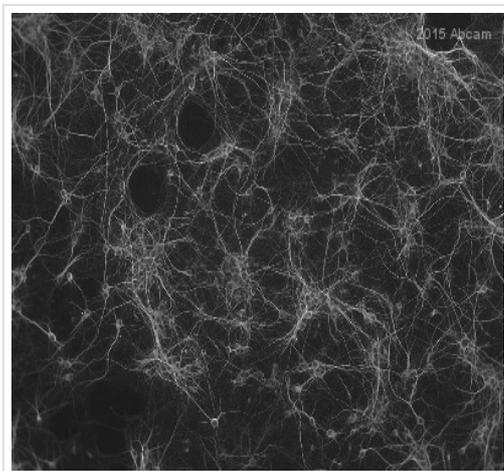
Marker (ab32454)

Gonzales PK et al. Transcriptome analysis of genetically matched human induced pluripotent stem cells disomic or trisomic for chromosome 21. PLoS One 13:e0194581 (2018).

All lanes : Anti-MAP2 antibody - Neuronal Marker (ab32454) at 1/1000 dilution

Lanes 1-2 : Trisomic induced Pluripotent Stem Cells (iPSCs)
**Lanes 3-4 :** Disomic induced Pluripotent Stem Cells (iPSCs)

Predicted band size: 199 kDa

Immunocytochemistry/ Immunofluorescence - Anti-

MAP2 antibody - Neuronal Marker (ab32454)

This image is courtesy of an Abreview submitted by Babben Tinner

ab32454 staining MAP2 in rat cryopreserved embryonic cortical neurons cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde with picric acid. Samples were incubated with primary antibody (1/2000 in 10mM PBS + 0.3% Triton-X) for 12 hours at 4°C. An Alexa Fluor® 488-conjugated donkey anti-rabbit IgG polyclonal (1/200) was used as the secondary antibody.
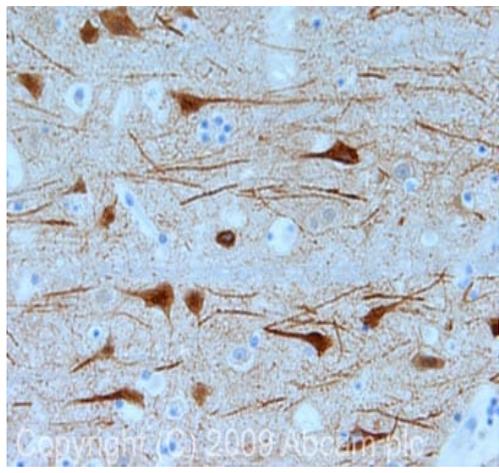
IHC image of MAP2 staining in human cerebral cortex FFPE section, performed on a Leica Bond^{TM} system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab32454, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MAP2 antibody - Neuronal Marker (ab32454)

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