Product datasheet

Anti-MAP2 antibody [HM-2] ab11267

Overview

Product name: Anti-MAP2 antibody [HM-2]
Description: Mouse monoclonal [HM-2] to MAP2
Host species: Mouse
Tested applications: Suitable for: ICC, IHC-Fr, ICC/IF, IHC-FrFl, WB, IHC-P, IHC-FoFr
Species reactivity: Reacts with: Mouse, Rat, Chicken, Cow, Human, Quail
Immunogen: Other Immunogen Type corresponding to MAP2. HM-2 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from mice immunized with rat brain microtubule associated proteins (MAPs).
Positive control: Rat brain extract.
General notes: Storage in frost-free freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer: pH: 7.40
Preservative: 0.097% Sodium azide
Constituent: 0.0268% PBS
Purity: Ascites
Purification notes: Purified from ascites.
Clonality: Monoclonal
Clone number: HM-2
Isotype: IgG1

Applications
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.

Our Abpromise guarantee covers the use of ab11267 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ICC</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>IHC-Fr</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/500. Fix cells in 4% paraformaldehyde/PBS for 45 min; then permeabilise cells with 0.2% Triton X-100 in PBS for 5 min (see Farah et al) OR fix in 4% paraformaldehyde (containing 0.2% picric acid in 0.1 M phosphate buffer, pH 6.9) for 15 min at room temperature (see O’Hare et al).</td>
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<tr>
<td>IHC-FrFI</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. PubMed: 24223856</td>
</tr>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 1 - 2 µg/ml. Detects a band of approximately 280 kDa. (see Farah et al).</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-FoFr</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/500. PubMed: 20424326</td>
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</table>

Target

Function
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Cellular localization
Cytoplasm, cytoskeleton.
**Rivastigmine preserves neuronal morphology and alters sAPP secretion**

At day 12 or day 20, cells were fixed for immunocytochemistry analysis and probed with anti-MAP2 (green) and anti-GFAP (red) antibodies. Neuronal MAP2 immunoreactivity declines to almost undetectable levels between day 12 and day 20 in untreated cells, whereas neuronal morphology is preserved in rivastigmine treated cultures. Glial GFAP was observed to increase in both treated and untreated cells between day 12 and day 20. These results confirm the degeneration of neurons by day 20.

MAP2 is detected using ab11267 in 4% paraformaldehyde-fixed, 0.5% Triton X-100 permeabilized embryonic rat cerebrocortical cells.

(From Figure 2A of Bailey et al)

Immunocytochemical analysis of B35 cells labelling MAP2 with ab11267 at a concentration of 2 μg/mL. The secondary was developed using Goat anti-mouse IgG. Cells were counterstained with DAPI to stain nuclei.

Anti-MAP2 antibody [HM-2] (ab11267) at 1 μg/ml + Rat brain lysate
Immunohistochemistry (Frozen sections) - Anti-MAP2 antibody [HM-2] (ab11267)

This image is courtesy of an Abreview submitted by Dr Grazyna Niewiadomska

ab11267 staining rat brain tissue sections by IHC-Fr. Sections were PFA fixed and permeabilized in TritonX100 prior to blocking with 3% BSA for 1 hour. The primary antibody was diluted 1/500 and incubated with the sample for 12 hours at 4°C. An Alexa Fluor® conjugated goat anti-mouse was used as the secondary antibody.

The image shows a cross section through the rat hippocampal CA1 area at magnification 200x. The anti-MAP2 staining is clearly visible in dendrites of pyramidal cells.

Immunocytochemistry/ Immunofluorescence - Anti-MAP2 antibody [HM-2] (ab11267)

This image is courtesy of an Abreview submitted by Aleksandra Maruszak

ab11267 staining MAP2 in human hippocampal progenitor cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.3% Triton X-100 and blocked with 5% serum for 1 hour at 18°C. Samples were incubated with the undiluted primary antibody for 12 hours at 4°C. An undiluted Alexa Fluor® 555-conjugated donkey anti-mouse IgG polyclonal was used as the secondary antibody.

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