NEUROMICS

MAP-2 Data Sheet

Catalog Number:	MO30000	**Host:**	Mouse
Product Type:	Protein A purified IgG_1. Clone: MT-07.	**Species Reactivity:**	Human, Mouse, Porcine
Immunogen Sequence:	MAP-2 from bovine brain enriched for kinesin.	**Format:**	PBS, 0.02% sodium azide.Concentration 1 mg/ml.

Applications: Immunohistochemistry: 10.0 µg/ml (Paraffin Embedded Only).

Dilutions listed only as a recommendation. Optimal dilution should be determined by researcher.

Storage: Long term: -70°C; Short term: +4°C. . Repeated freeze/thaw cycles compromise the integrity of the antibody.

Application Notes

Immunohistochemistry Protocol

Tissue Preparation: Formalin fixation and embedding in paraffin wax.

Tissue Sectioning: Make 4-µm sections and place on pre-cleaned and charged microscope slides. Heat in a tissue-drying oven for 45 minutes at 60°C.

Deparaffinization: Wash dry slides in 3 changes of xylene – 5 minutes each at Room Temperature.

Rehydration: Wash slides in 3 changes of 100% alcohol – 3 minutes each at Room Temperature. Wash slides in 2 changes of 95% alcohol – 3 minutes each at Room Temperature Wash slides in 1 change of 80% alcohol – 3 minutes at Room Temperature. Rinse slides in gentle running distilled water – 5 minutes at Room Temperature.

Antigen retrieval: Steam slides in 0.01 M sodium citrate buffer, pH 6.0 at 99-100°C - 20 minutes. Remove from heat and let stand at room temperature in buffer - 20 minutes. Rinse in 1X TBS with Tween (TBST) – 1 minute at Room Temperature.

Immunostaining: (Do not allow tissues to dry at any time during the staining procedure). Apply a universal protein block – 20 minutes at Room Temperature. Drain protein block from slides, apply diluted primary antibody – 45 minutes at Room Temperature. Rinse slides in 1X TBST - 1 minute at Room Temperature. Apply a biotinylated anti-mouse IgG (H+L) secondary *– 30 minutes at Room Temperature. Rinse slides in 1X TBST - 1 minute at Room Temperature. Apply alkaline phosphatase streptavidin – 30 minutes at Room Temperature. Rinse slides in 1X TBST - 1 minute at Room Temperature. Apply alkaline phosphatase chromogen substrate – 30 minutes at Room Temperature. Wash slides in distilled water – 1 minute at Room Temperature

Dehydrate: (This method should only be used if the chromogen substrate is alcohol insoluble (e.g. Vector Red, DAB). Wash slides in 2 changes of 80% alcohol – 1 minute each at Room Temperature. Wash slides in 2 changes of 95% alcohol – 1 minute each at Room Temperature. Wash slides in 3 changes of 100% alcohol – 1 minute each at Room Temperature. Wash slides in 3 changes of xylene – 1 minute each at Room Temperature. Apply coverslip.

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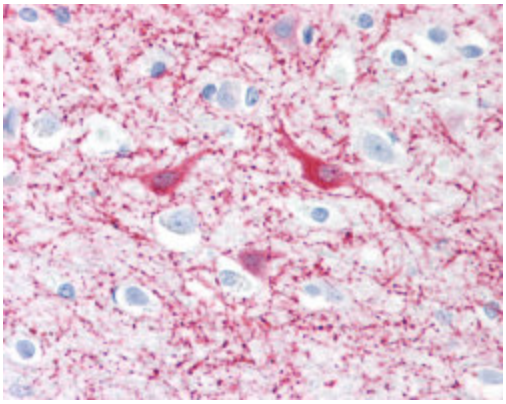
Description/Data:
Microtubules are associated with a family of proteins called microtubule associated proteins (MAPs), which includes the protein tau and a group of proteins referred to as MAP1, MAP2, MAP3, MAP4 and MAP5. MAP2 is made up of two ~280kDa apparent molecular weight bands referred to as MAP2a and MAP2b. A third lower molecular weight form, usually called MAP2c, corresponds to a pair of protein bands running at ~70kDa on SDS-PAGE gels. All these MAP2 forms are derived from a single gene by alternate transcription, and all share a C-terminal sequence which includes either three or four microtubule binding peptide sequences, which are very similar to those found in the related microtubule binding protein tau. MAP2 isoforms are expressed only in neuronal cells and specifically in the perikarya and dendrites of these cells. Antibodies to MAP2 are therefore excellent markers on neuronal cells, their perikarya and neuronal dendrites. In contrast tau is found predominantly in neuronal axons.

Image: MAP-2 (dilution: 10 ug/ml) staining of Human Brain, Cortex (formalin-fixed, paraffin-embedded) followed by biotinylated anti-mouse IgG secondary antibody, alkaline phosphatase-streptavidin and chromogen. Protocol on data-sheet.



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