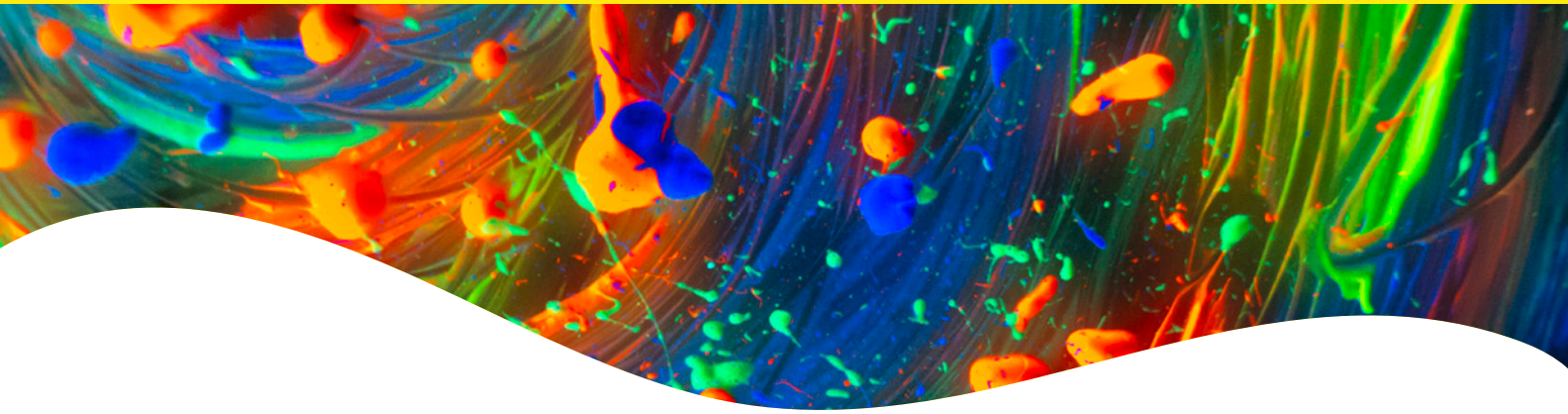
PhenoVue anti-MAP2 Antibody



Overview

MAP2 is a neuron specific protein that promotes the assembly and stability of microtubule networks, the cytoskeleton dynamic and other functions essential for the development and the maintenance of neuronal morphology MAP2 functions. Its neuron-specificity make MAP2 a key marker of mature and post-mitotic neurons.

Our PhenoVue anti-MAP2 antibody is a mouse IgG1 antibody which can be used with the PhenoVue anti-B3 tubulin antibody (included in the PhenoVue neuronal differentiation staining kit). The simultaneous detection of MAP2 and B3-tubulin reflects neurons maturity.

Product information

Product name	PhenoVue anti-MAP2 antibody
Part number	PABMAP2
Packaging	1 vial of 100 µL
Concentration	100X
Format	Liquid
Clonality	Monoclonal
Host species	Mouse
Isotype	IgG1,k
Cross-reactivity	Human, mouse, rat
Purification	Affinity chromatography
Formulation	PO_4 pH7 100 mM -0.1% BSA
Applications	High content analysis (immunofluorescence, imaging, microscopy)
Shipping conditions	Dry ice
Storage conditions	-16 °C or below. Protect from light

Stability

- The stability of this product is guaranteed until the expiration date provided in the Certificate of Analysis, when stored as recommended and protected from light.
- To avoid multiple freeze/thaw cycles, freeze the stock solution in aliquots.

Protocols

Cell culture

Seed cells in PhenoPlate 384-well imaging microplates (or any other convenient cell culture vessels). Incubate in the appropriate cell culture conditions, usually 37 °C, 5% CO_2 until 50-70% confluency.

Fixed-cell imaging

Rinse briefly in phosphate-buffered saline (PBS) then proceed with cell fixation.

1. **Fixation:** Add ready to use PhenoVue paraformaldehyde 4% methanol-free solution (PVPFA41) for 10-20 min at room temperature.
2. **Washing:** Wash three times with PBS for 5 min.
3. **Permeabilization:** Add PhenoVue permeabilization solution diluted at 0.1% Triton X-100 in PBS, for 10 min at room temperature.
4. **Washing:** Wash three times with PBS for 5 min.
5. **Saturation:** Incubate with PBS-1% BSA for 1h at room temperature.
6. **Washing:** Wash three times with PBS for 5 min.
7. **Primary antibody incubation:** Add 25 µL per well of mouse monoclonal anti-nestin antibody and incubate for 1-3h at room temperature or overnight at 4 °C.
8. **Washing:** Wash three with PBS for 5 min.
9. **Fluorescent secondary antibody incubation:** Add 25 µL per well of PhenoVue Fluor - Goat anti-mouse antibody or PhenoVue Fluor 488 - Rat anti mouse-IgG1 antibody and incubate for 1h at room temperature, protected from light.
10. **Washing:** Wash three times with PBS for 5 min.
11. **Acquire images on an imaging device.**

Tips

- PhenoVue anti-MAP2 antibody can be revealed with PhenoVue Fluors - Goat anti-mouse antibody or PhenoVue Fluor 488 - Rat anti-mouse IgG1 highly cross-adsorbed.
- PhenoVue anti-MAP2 antibody is a mouse IgG1 antibody that be used with B3-tubulin antibody to assess neurons maturity.

Safety information

Chemical reagents are potentially harmful, please refer to the Safety Data Sheet (SDS) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

Applications

- High-content analysis / high-content screening
- Imaging microscopy
- Flow cytometry

Validation data

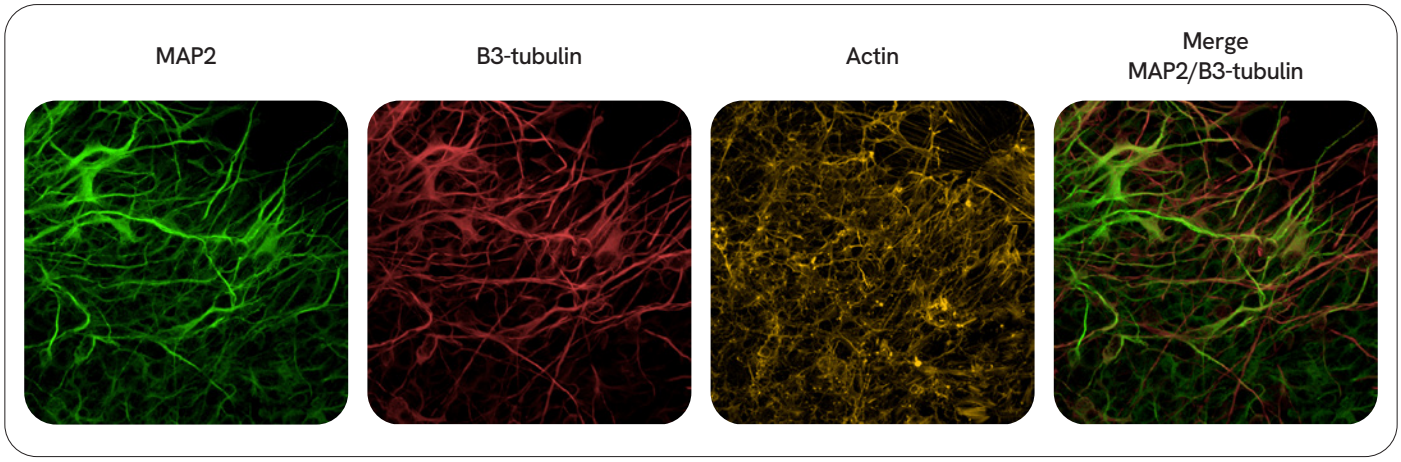


Figure 1: iPSC-derived human cortical neurons were seeded in PhenoPlate 96-well microplates (40,000 cells/well) and incubated at 37 °C, 5% CO_2. 7 days post-seeding, cells were fixed, permeabilized, saturated and immunostained with PhenoVue anti-MAP2 antibody, PhenoVue anti-TUBB3 antibody as well as PhenoVue Fluor 555 - Phalloidin. Secondary PhenoVue Fluor 488 - Goat anti-mouse IgG1 and PhenoVue Fluor 647 - Goat anti-mouse IgG2a antibodies were used to detect MAP2 and B3 Tubulin, respectively. Images were acquired on the Opera Phenix high-content screening system, confocal mode with the 63X water objective.

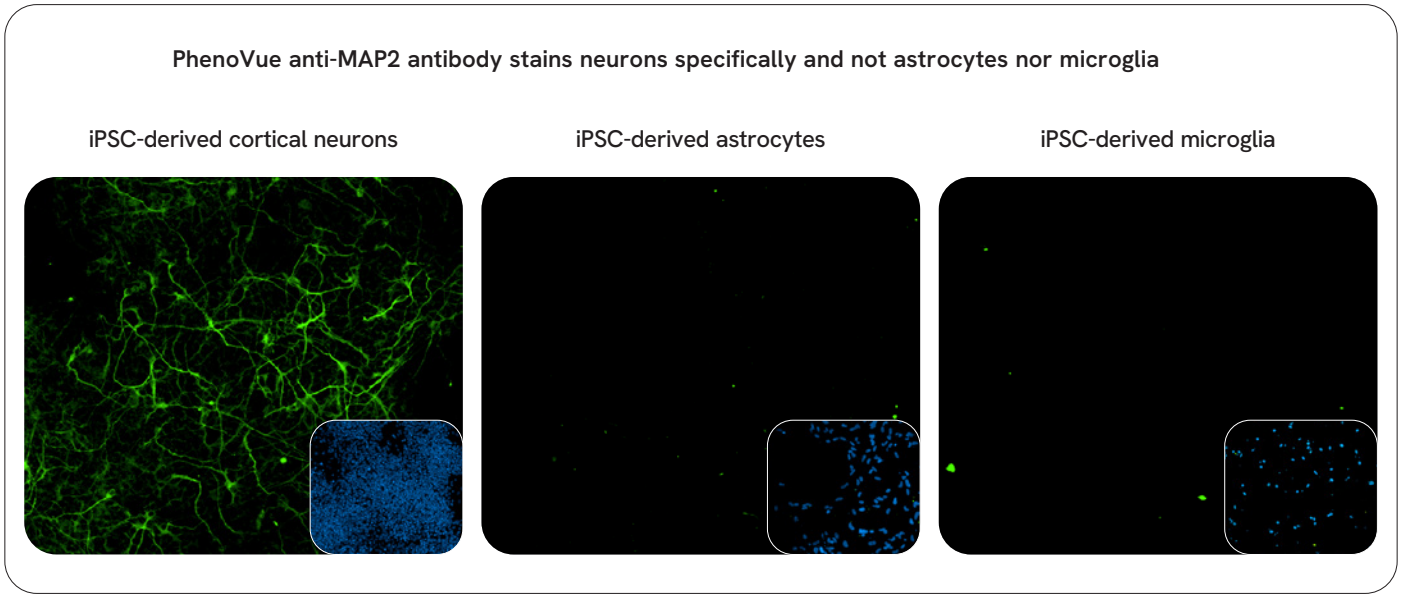


Figure 2: iPSC-derived human cortical neurons (40,000 cells/well), iPSC-derived human astrocyte (30,000 cells/well) as well as iPSC-derived human microglia (15,000 cells/well) were seeded in PhenoPlate 96-well microplates and incubated at 37 °C, 5% CO_2 for 7 (neurons) or 4 days (astrocyte and microglia). Then, cells were fixed, permeabilized, saturated and immunostained with PhenoVue anti-MAP2 antibody, followed by secondary PhenoVue Fluor 488 - Goat anti-mouse IgG1 as well as PhenoVue Hoechst 33342. Images were acquired on the Opera Phenix high-content screening system, confocal mode with the 20X water objective.

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