

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human MAP2 in direct ELISAs.
<b>Source</b>	Monoclonal Mouse IgG <sub>3</sub> Clone # 885232
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human MAP2 Gly1689-Lys1824 Accession # P11137
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in TBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

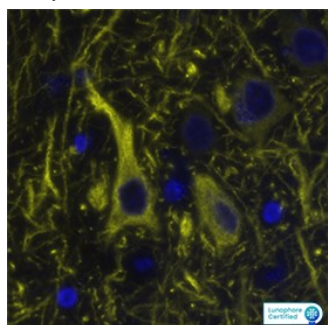
#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunocytochemistry</b>	0.5-25 µg/mL	See Below
<b>Multiplex Immunofluorescence</b>	20 µg/mL	Immersion fixed paraffin-embedded sections of human Brain Cortex
<b>Immunohistochemistry</b>	0.5-25 µg/mL	See Below

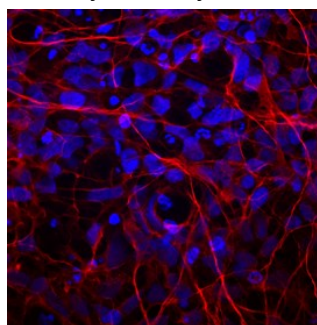
## DATA

### Multiplex Immunofluorescence



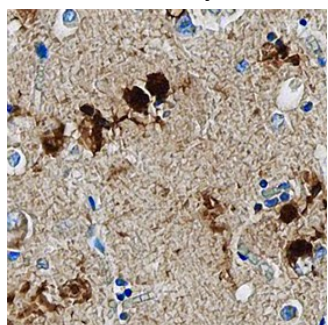
**Detection of MAP2 in Human Brain Cortex via seqIF™ staining on COMET™** MAP2 Antibody was detected in immersion fixed paraffin-embedded sections of human Brain Cortex using Mouse Anti-Human MAP2, Monoclonal Antibody (Catalog # MAB8304) at 20 µg/mL at 37 °Celsius for 8 minutes. Before incubation with the primary antibody, tissue underwent an all-in-one dewaxing and antigen retrieval preprocessing using PreTreatment Module (PT Module) and Dewax and HIER Buffer H (pH 9; Eprelia Catalog # TA-999-DHBH). Tissue was stained using the Alexa Fluor™ 647 Goat anti-Mouse IgG Secondary Antibody at 1:200 at 37 °Celsius for 2 minutes. (Yellow; Lunaphore Catalog # DR647MS) and counterstained with DAPI (blue; Lunaphore Catalog # DR100). Specific staining was localized to the cytoplasm. Protocol available in [COMET™ Panel Builder](#).

### Immunocytochemistry



**MAP2 in Human Embryonic Stem Cells.** MAP2 was detected in immersion fixed human embryonic stem cells/neurospheres using Mouse Anti-Human MAP2 Monoclonal Antibody (Catalog # MAB8304) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces. View our protocol for [Fluorescent ICC Staining of Stem Cells on Coverslips](#).

### Immunohistochemistry



**MAP2 in Human Brain.** MAP2 was detected in immersion fixed paraffin-embedded sections of human Alzheimer's brain using Mouse Anti-Human MAP2 Monoclonal Antibody (Catalog # MAB8304) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to neurofibrillary tangles and plaques. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
<b>Shipping</b>	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

MAP2 (Microtubule-associated protein 2) is a 1827 amino acid (aa) cytoskeletal associated protein. Human MAP2 shares 84% and 79% aa identity with mouse and rat MAP2, respectively. Multiple splice forms exist, resulting in 4 distinct isoforms. MAP2 functions in microtubule polymerization and stabilization in both normal and malignant cell types. It has been demonstrated to play a critical role in neurite outgrowth and loss of MAP2 function in neurons may lead to neural degeneration.