**Technical Data Sheet**

**Alexa Fluor® 488 Mouse anti-β-Tubulin, Class III**

**Product Information**

**Material Number:** 560381

**Alternate Name:** tubulin, beta 3; MC1R; TUBB3; TUBB4; tubulin, beta-4

**Size:** 50 Tests

**Vol. per Test:** 20 µl

**Clone:** TUJ1

**Immunogen:** Rat brain microtubules

**Isotype:** Mouse IgG2a

**Reactivity:**
- QC Testing: Human
- Reported Reactivity: Rat

**Storage Buffer:** Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

**Description**

Microtubules are formed by the self assembly of tubulin and are one of the major components of the eukaryotic cytoskeleton. The two main tubulin isoforms, α- and β-tubulin, are usually products of separate genes. The β-tubulin family includes six expressed genes that produce the polypeptide isoforms known as Classes I through VI, each of which have a distinct pattern of expression. Class III β-tubulin is found in neurons and mammalian testis cells and is widely used as a neuronal marker in developmental neurobiology, neoplasia, and stem cell research. Class III β-tubulin expression in neuronal and neuroblastomas is differentiation dependent, and its expression in certain non-neuronal neoplasms has been associated with poor prognosis and/or resistance to chemotherapy.

**Flow cytometry analysis of Alexa Fluor® 488 Mouse anti-β-Tubulin, Class III in H9 cells.**

H9 human embryonic stem (ES) cells (WiCell, Madison, WI) were differentiated into Neural Precursor cells (NPCs) and grown for 4 passages before differentiating into neurons and glia for 12 days. The cells were fixed (BD Cytofix™ buffer, Cat. No. 554655) for 20 minutes at room temperature, permeabilized with BD Phosflow™ Perm Buffer I (Cat. No. 557885), and then stained with either Alexa Fluor® 488 Mouse anti-β-Tubulin, Class III (solid line) or Alexa Fluor® 488 Mouse IgG2a, κ Isotype control (Cat. No. 558055, dashed line). This antibody also works in BD Phosflow™ Perm Buffer III (Cat. No. 558050). Flow cytometry was performed on a BD FACSCanto™ II flow cytometry system.

**Preparation and Storage**

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated to Alexa Fluor® 488 under optimum conditions, and unreacted Alexa Fluor® 488 was removed.

**Application Notes**

**Application**

- Intracellular staining (flow cytometry) Routinely Tested

**Suggested Companion Products**

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<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
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<tbody>
<tr>
<td>554655</td>
<td>Fixation Buffer</td>
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<tr>
<td>557885</td>
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<tr>
<td>558055</td>
<td>Alexa Fluor® 488 Mouse IgG2a, κ Isotype control</td>
<td>50 Tests</td>
<td>MOPC-173</td>
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<tr>
<td>558050</td>
<td>Perm Buffer III</td>
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Product Notices
1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use $1 \times 10^6$ cells in a 100-µl experimental sample (a test).
3. Alexa Fluor® 488 fluorochrome emission is collected at the same instrument settings as for fluorescein isothiocyanate (FITC).
4. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
6. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. An isotype control should be used at the same concentration as the antibody of interest.

References