### Basic Information

**Catalog Number:** 66375-1-Ig

**Size:** 150μl, Concentration: 1000 μg/ml by Nanodrop

**Source:** Mouse

**Isotype:** IgG1

**GenBank Accession Number:** NM_001197181

**GeneID (NCBI):** 10381

**Full Name:** tubulin, beta 3

**Calculated MW:** 55 kDa

**Observed MW:** 50-55 kDa

**Purification Method:** Protein G purification

**CloneNo.:** 1F8G1

**Recommended Dilutions:**
- **WB** 1:5000-1:50000
- **IHC** 1:400-1:20000
- **IF** 1:50-1:500

### Applications

**Tested Applications:** FC, IF, IHC, WB, ELISA

**Cited Applications:** FC, IF, IHC, WB

**Species Specificity:** human, mouse, rat, rabbit, chicken, pig

**Cited Species:** human, chicken, rat, mouse

**Positive Controls:**
- **WB** : SH-SYSY cells, PC-12 cells, Neuro-2a cells, Pig brain, Rabbit brain, Rat brain Mouse brain, Chicken brain, human brain tissue
- **IHC** : human cerebellum tissue, mouse brain tissue, mouse cerebellum tissue
- **IF** : rat brain tissue, human neuron, iPS cells, mouse brain tissue

**Note-IHC:** suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

### Background Information

TUBB3, the class III β tubulin or Tuj1, is selectively expressed in testis and neurons of the central and peripheral nervous system. It has been widely used as a marker for neurons. Aberrant expression of TUBB3 has also been found in various tumors of non-neural origin and can be used as a biomarker for cancer aggressiveness and a marker for the tendency to respond poorly to chemotherapy. This antibody is specific to TUBB3 but not cross-react with other tubulin isoforms.

### Notable Publications

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<th>Author</th>
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<tr>
<td>Ji-Qiang Fu</td>
<td>30264483</td>
<td>CNS Neurosci Ther</td>
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<td>Shuai Yu</td>
<td>34616727</td>
<td>Front Cell Dev Biol</td>
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<tr>
<td>Shuai Huang</td>
<td>31660066</td>
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### Storage

**Storage:** Store at -20°C. Stable for one year after shipment.

**Storage Buffer:** PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

**Aliquoting is unnecessary for -20°C storage**

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For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.
Selected Validation Data

Immunofluorescent staining of TUBB3 (66375-1-lg, 1:250) with 4% PFA fixed control hiPSC derived neuronal cultures (35 days old). (Green: TUBB3; Blue: DAPI). Provided by BioTalentum Ltd., Hungary.

Immunofluorescence analysis of human pluripotent stem cell-derived astrocytes with S100β (15146-1-AP) at 1/200 (Magenta) and neurons with TUJ1 (66375-1-lg) at 1:500 (Green). The sample was fixed with 4% Paraformaldehyde and permeabilized with 0.3% Triton X-100. Alexa Fluor 488-conjugated goat anti-mouse IgG (1/500) and Alexa Fluor 594-conjugated goat anti-rabbit IgG (1/500) were used as the secondary antibodies. Nuclei were counterstained with DAPI (blue).

Immunofluorescent analysis of (4% PFA) fixed rat brain tissue using 66375-1-Ig (TUBB3-specific antibody), at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L). The section was co-stained with 26975-1-AP (NeuN antibody, red).

Various lysates were subjected to SDS PAGE followed by western blot with 66375-1-lg (TUBB3-specific antibody) at dilution of 1:4000 incubated at room temperature for 1.5 hours.

1X10^6 SH-SY5Y cells were intracellularly stained with 0.2 ug Anti-Human TUBB3-specific (66375-1-lg, Clone:2F8G10) and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000 (red), 0.2 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).

Immunohistochemical analysis of paraffin-embedded mouse brain tissue using 66375-1-lg (TUBB3-specific Antibody) at dilution of 1:400 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

Immunohistochemical analysis of paraffin-embedded human cerebellum tissue slide using 66375-1-lg (TUBB3-specific Antibody) at dilution of 1:400 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

Western blot analysis of TUBB3 in various tissues and cell lines with 66375-1-lg (TUBB3-specific Antibody) at dilution of 1:40,000 incubated at room temperature for 1.5 hours.

Immunohistochemical analysis of paraffin-embedded human cerebellum tissue slide using 66375-1-lg (TUBB3-specific Antibody) at dilution of 1:20000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

Immunohistochemical analysis of paraffin-embedded human cerebellum tissue slide using 66375-1-lg (TUBB3-specific antibody) at dilution of 1:20000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).