

For Research Use Only

# TUBB3-specific/TUJ1 Monoclonal antibody

Catalog Number: 66375-1-Ig

Featured Product

76 Publications



## Basic Information

Catalog Number:

66375-1-Ig

Size:

150ul, Concentration: 1000 ug/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.:

1F8G10

Recommended Dilutions:

WB: 1:5000-1:50000

IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC: 1:400-1:20000

IF-P: 1:50-1:500

IF/ICC: 1:125-1:500

FC (Intra): 0.20 ug per 10<sup>6</sup> cells in a 100 µl suspension

## Applications

Tested Applications:

WB, IHC, IF/ICC, IF-P, FC (Intra), IP, ELISA

Cited Applications:

WB, IHC, IF

Species Specificity:

human, mouse, rat, pig, rabbit, chicken

Cited Species:

human, mouse, rat, chicken

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

Positive Controls:

WB: SH-SY5Y cells, fetal human brain tissue, HEK-293 cells, PC-12 cells, Neuro-2a cells, Pig brain, Rabbit brain, Rat brain Mouse brain, Chicken brain

IP: SH-SY5Y cells,

IHC: human cerebellum tissue, mouse brain tissue, mouse cerebellum tissue

IF-P: rat brain tissue, Retinal organoids, mouse brain tissue, human neuron

IF/ICC: iPS cells,

FC (Intra): SH-SY5Y cells,

## Background Information

TUBB3, the class III  $\beta$  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

Author	Pubmed ID	Journal	Application
Ji-Qiang Fu	30264483	CNS Neurosci Ther	IF
Shuai Yu	34616727	Front Cell Dev Biol	WB
Shuai Huang	31660066	Theranostics	IF

## Storage

Storage:

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

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

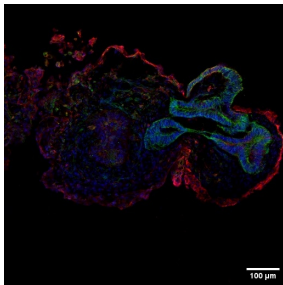
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

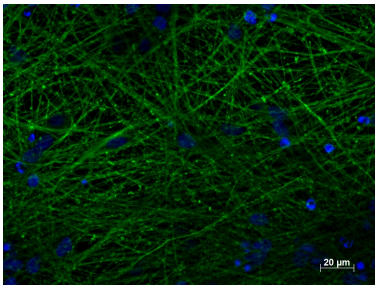
E: proteintech@ptglab.com  
W: ptglab.com

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

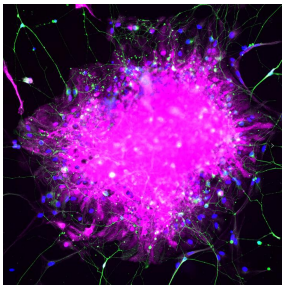
Selected Validation Data



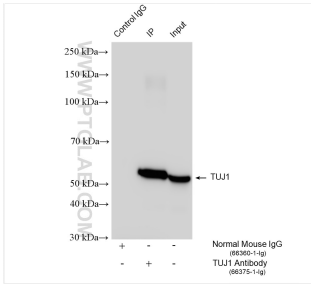
Retinal organoids (day 60) generated from human induced pluripotent stem cells (iPSCs) and fixed with 4% PFA. Stained for Tubulin beta 3/TUJ1 using 66375-1-Ig at 1:500 dilution (green) and Cytokeratin 19 using 10712-1-AP at 1:200 (red). Nuclear stain DAPI (blue). Scale bar = 100 μm. Data generated by Alessandro Bellapianta at Johannes Kepler Universitat, Austria.



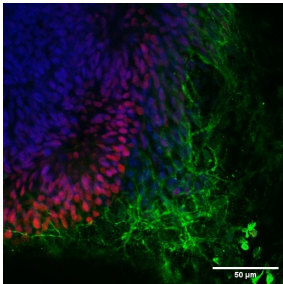
Immunofluorescent staining of TUBB3 (66375-1-Ig, 1:250) with 4% PFA fixed control hiPSC derived neuronal cultures (35 days old). (Green: TUBB3; Blue: DAPI). Provided by BioTalentum Ltd., Hungary.



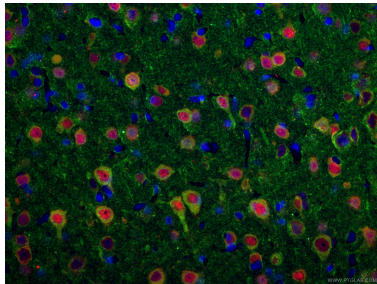
Immunofluorescence analysis of human pluripotent stem cell-derived astrocytes with S100β (15146-1-AP) at 1/200 (Magenta) and neurons with TUJ1 (66375-1-Ig) at 1:500 (Green). The sample was fixed with 4% Paraformaldehyde and permeabilized with 0.3% Triton X-100. Alexa Fluor 488-conjugated goat anti-mouse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



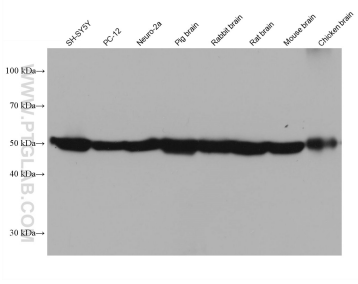
IP result of anti-TUBB3-specific/TUJ1 (IP:66375-1-Ig, 4ug; Detection:66375-1-Ig 1:10000) with SH-SY5Y cells lysate 1240 ug.



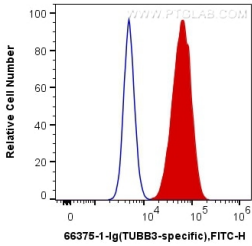
Retinal organoids (day 30) generated from human induced pluripotent stem cells (iPSCs) and fixed with 4% PFA. Stained for Tubulin beta 3/TUJ1 using 66375-1-Ig at 1:500 dilution (green) and PAX6 (12323-1-AP) at 1:500. Nuclear stain DAPI (blue). Scale bar = 50 μm. Data generated by Alessandro Bellapianta at Johannes Kepler Universitat, Austria.



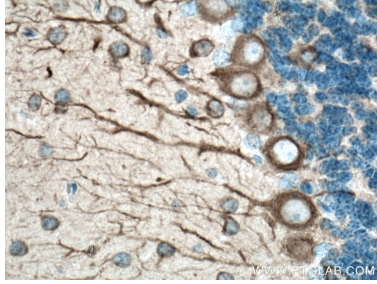
Immunofluorescent analysis of (4% PFA) fixed rat brain tissue using 66375-1-Ig (TUBB3-specific antibody), at dilution of 1:200 and Coralite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L). The section was co-stained with 26975-1-AP (NeuN antibody, red).



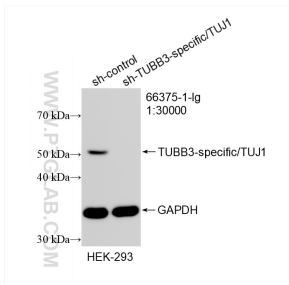
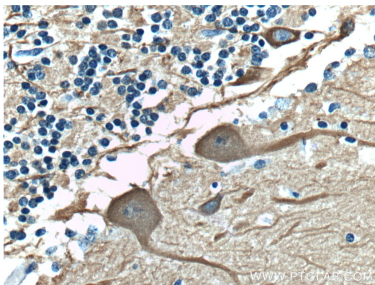
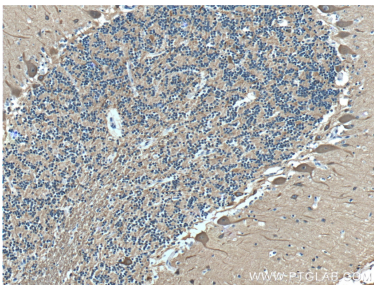
Various lysates were subjected to SDS PAGE followed by western blot with 66375-1-Ig (TUBB3-specific antibody) at dilution of 1:49000 incubated at room temperature for 1.5 hours.



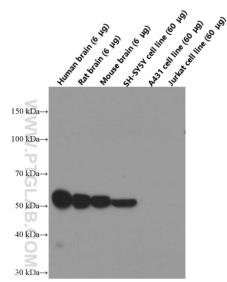
1X10<sup>6</sup> SH-SY5Y cells were intracellularly stained with 0.2 ug Anti-Human TUBB3-specific (66375-1-Ig, Clone:1F8G10) and Coralite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000 (red), or 0.2 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry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



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 66375-1-Ig (TUBB3-specific antibody) at dilution of 1:200 (under 40x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).

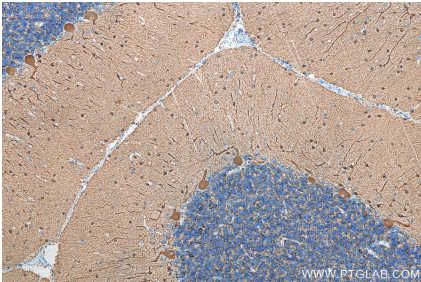


Immunohistochemical analysis of paraffin-embedded human cerebellum tissue slide using 66375-1-Ig (TUBB3-specific Antibody) at dilution of 1:400 (under 10x lens).



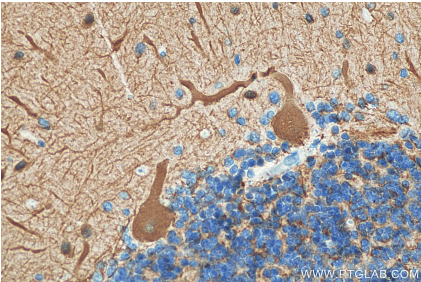
Western blot analysis of TUBB3 in various tissues and cell lines with 66375-1-Ig (TUBB3-specific Antibody) at dilution of 1:40,000 incubated at room temperature for 1.5 hours.

Immunohistochemical analysis of paraffin-embedded human cerebellum tissue slide using 66375-1-Ig (TUBB3-specific Antibody) at dilution of 1:400 (under 40x lens).



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

WB result of TUBB3-specific/TUJ1 antibody (66375-1-Ig; 1:30000; incubated at room temperature for 1.5 hours) with sh-Control and sh-TUBB3-specific/TUJ1 transfected HEK-293 cells.



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