

Anti-Tubulin, beta III isoform, C-terminus, clone TU-20 (Similar to TUJ1)

Monoclonal Antibody

Cat. # MAB1637

Lot # 2929307

FOR RESEARCH USE ONLY
NOT FOR USE IN HUMANS

pack size: 100 µL

Store at -20°C

Certificate of Analysis

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Applications	Species Cross-Reactivity	Antibody Isotype	Epitope/ Region	Host Species	Molecular Weight	Accession #
WB, ELISA, IC, IH, IP	Av, B, H, M, Mk, Po, R, Sh	IgG1	C-terminus	M	55 kDa	NP_006077

Background

Tubulin is one of several members of a small family of globular proteins. The most common members of the tubulin family are α -tubulin and β tubulin, the proteins which makes up microtubules. Each has a molecular weight of approximately 55 kiloDaltons. Microtubules are assembled from dimers of α - and β -tubulin. These subunits are slightly acidic with an isoelectric point between 5.2 and 5.8. Tubulin was long thought to be specific to eukaryotes. Recently, however, the prokaryotic cell division protein FtsZ was shown to be evolutionarily related to tubulin.

Presentation

Mouse monoclonal IgG1 ascites in buffer containing PBS containing pH 7.4, with 1% (w/v) high-grade protease free BSA and 15 mM sodium azide.

Specificity

The antibody reacts with the C-terminus of the neuron specific beta III isoform of tubulin. Does not identify beta tubulin found in glial cells.

Species Cross-reactivity

Mouse. Expected to cross-react with Avian, Porcine (Pig), Rat, Bovine, Sheep, Human, Monkey. Reactivity with other species has not been confirmed.

Immunogen

A synthetic peptide corresponding to amino acids 443-450 (ESESQGPQ) of human class III beta-tubulin conjugated to KLH.

Molecular Weight

55 kDa

Storage and Handling

Stable for 1 year at -20°C in undiluted aliquots from date of receipt.

Handling Recommendations: Upon first thaw, and prior to removing the cap, centrifuge the vial and gently mix the solution. Aliquot into microcentrifuge tubes and store at -20°C. Avoid repeated freeze/thaw cycles, which may damage IgG and affect product performance.

Control

Positive control: Brain tissue or neurons of any type.

Negative control: Non neural tissue or Astrocytes.

Quality Control Testing

Routinely evaluated by Western Blot on Mouse Brain lysates.

Western Blot Analysis: 1:1000 dilution of this lot detected tubulin (β III) on 10 ug of Mouse Brain lysates.



Western Blot Analysis:
Mouse Brain lysate was resolved by electrophoresis, transferred to PVDF membrane and probed with anti-TUBULIN (BETA III) (1:1000 dilution of this lot). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and a chemiluminescence detection system.

Arrow indicates protein TUBULIN (BETA III) (~55 kDa).



References

- Scintu, Franca, et al. (2006). *BMC neuroscience [electronic resource]*. 7: 14.
- Shriver, Leah P. and Dittel, Bonnie N., (2006). *Am J Pathol*. 169: 990-1011.
- Argenti, B., et al. (2005). *J. Neurosci.* 25(36): 8338-8346.
- Minguell, J. J., et al. (2005). *Stem Cells Dev.* 14(4): 408-414.
- Rieske, P., et al. (2005). *Differentiation*. 73(9-10): 474-483.

Additional Research Applications

Immunohistochemistry: On formalin fixed frozen or paraffin embedded tissue sections 1:20 to 1:100 dilution from a previous lot. High temperature citrate buffer antigen retrieval is recommended with paraffin embedded tissue sections.

Immunoprecipitation: A previous lot of this antibody was used on Immunoprecipitation.

APPLICATION LEGEND: WB Western Blotting IP Immunoprecipitation IC Immunocytochemistry IF Immunofluorescence IH Immunohistochemistry (Tissue) ELISA Enzyme-linked Immunosorbent Assay IH(P) Immunohistochemistry (Paraffin)

SPECIES LEGEND: Av Avian B Bovine H Human M Mouse Mk Monkey Po Porcine (Pig) R Rat Rb Rabbit Sh Sheep

Please visit www.millipore.com for additional product information, test data and references.

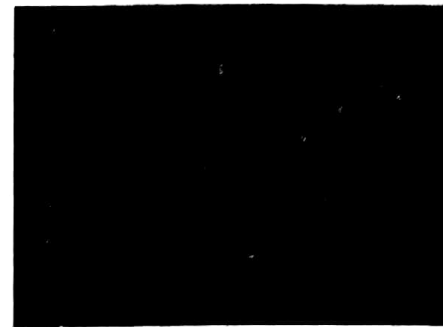
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Additional Research Applications**Immunocytochemistry:** 1:100 to 1:500 dilution from a previous lot was used on fixed cells.**ELISA:** A previous lot of this antibody was used on ELISA.

Optimal working dilution must be determined by the end user.



Mouse anti-Beta III Tubulin (Catalog Number MAB1637). Localization of beta III Tubulin (red) and GFAP (green) in rat brain cortical cells thawed and cultured for 7 days. The cells were obtained from Comrex, Inc. Photo courtesy of QBMCell Science.



Mouse anti-beta III tubulin (Catalog Number MAB1637). Localization of beta III tubulin in rat brain cortical cells thawed and cultured for 7 days. The cells were obtained from Comrex, Inc. Photo courtesy of QBMCell Science.

PROTOCOL**Western Blotting**

1. Perform SDS-polyacrylamide gel electrophoresis (SDS-PAGE) on cell lysate and transfer the proteins to a PVDF membrane. Wash the PVDF membrane twice with water.
2. Block the blotted PVDF membrane in freshly prepared 5% BSA with 0.05% Tween®-20 for 1 hour at room temperature with constant agitation.
3. Incubate the PVDF with the recommended dilution of anti-Tubulin, beta III isoform, C-terminus, clone TU-20 (Similar to TUJ1) diluted in freshly prepared 5% BSA for 1 hour at room temperature or overnight with agitation at 2-8°C.
4. Wash the PVDF 3 times with TBST.
5. Incubate the PVDF in the secondary reagent of choice (a goat anti-Mouse HRP conjugated IgG, Catalog # 12-349 1:1000 dilution was used) in 5% milk for 1 hour with agitation at room temp.
6. Wash the PVDF 3-5 times with TBST.
7. Use Spray and Glow Catalog # 17-373 to visualize results. Use as directed.

Important Note: During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µL or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.

RELATED PRODUCTS (specific)

cat #	description
AB935	■ Anti-Tubulin
05-559	■ Anti-Tubulin, clone 2G10, neuronal
MAB1864	■ Anti-Tubulin, clone YL1/2
AB3201	■ Anti-Tubulin, Detyrosinated
05-829X-555	■ Anti-α-Tubulin, Alexa Fluor® 555 conjugate
05-829	■ Anti-α-Tubulin, clone DM1A
16-232	■ Anti-α-Tubulin, clone DM1A, Alexa Fluor® 488 conjugate
MAB5566	■ Anti-Tubulin, Alpha, detyrosinated
CBL270	■ Anti-Tubulin, clone YOL 1/34
AB15708	■ Anti-Beta III tubulin
AB9354	■ Anti-Beta III Tubulin, (Similar to TuJ1 antigen)
MAB5564	■ Anti-Tubulin, Beta III
MAB1637	■ Anti-Tubulin, beta III isoform, C-terminus, clone TU-20 (Similar to TUJ1)
CBL412	■ Anti-Tubulin, beta III, C-terminus, clone TU-20 (Similar to TUJ1)
05-661	■ Anti-β-Tubulin, clone AA2
16-230	■ Anti-β-Tubulin, clone AA2, Alexa Fluor® 488 conjugate
16-231	■ Anti-β-Tubulin, clone AA2, Alexa Fluor® 555 conjugate
MAB5562	■ Anti-Tubulin, Beta II
MAB380	■ Anti-Tubulin, beta, clone 5H1
MAB3408	■ Anti-Tubulin, beta, clone KMX-1
AB3203	■ Anti-Tubulin, delta 2

RELATED PRODUCTS (non-specific)

cat #	description
IPVH00010	■ Immobilon-P 26.5 cm x 3.75 m Roll PVDF 0.45 µm
IPFL00010	■ Immobilon-FL 26.5 cm x 3.75 m Roll PVDF 0.45 µm
IPVH07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.45 mm (sheet) 50/pk
ISEQ00010	■ Immobilon-P SQ 26.5 cm x 3.75 m 1 roll PVDF 0.2 µm
ISEQ07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.2 mm (sheet) 50/pk
IPFL07810	■ Immobilon-FL 7 x 8.4 cm PVDF 0.45 mm (sheet) 10/pk
WBKLS0050	■ IMMOBILON WESTERN CHEMILUM HRP SUBSTRATE 50 mL
17-373SP	■ Spray & Glow™ ECL Western Blotting 40 mL
2060	■ Re-Blot Western Blot Recycling Kit
2500	■ Re-Blot Plus Western Blot Recycling Kit
82080-175GM	■ Blot Quick Blocker Membrane Blocking Agent 175G
2170	■ CHEMBLOCKER-1LT
20-200	■ IMMUNOBLOT BLOCKING REAGENT 20G

■ antibodies ■ Multiplex products ■ blottools ■ cell culture ■ enzymes ■ kits ■ proteins/peptides ■ siRNA/cDNA products

Please visit www.millipore.com for additional product information, test data and references

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