

Monoclonal Antibody to TUBB3 / TUBB4 (Loading Control) - FITC

Alternate names:	Tubulin beta-3 chain, Tubulin beta-4, Tubulin beta-III
Catalog No.:	BM170F
Quantity:	0.1 mg
Concentration:	1.0 mg/ml
Background:	The betaIII-tubulin isotype is present dominantly in cells of neuronal origin and it is one of the earliest marker of neuronal differentiation. Class III beta-tubulin, is regarded as a specific probe for the cells of neuronal origin as well as for the tumours originating from these cells. The neuron-associated class III beta-tubulin isotype is most abundant in cells of neuronal origin but was also detected in Sertoli cells of the testis and transiently in non-neuronal embryonic tissues.
Uniprot ID:	Q13509
NCBI:	NP_001184110.1
GeneID:	10381
Host / Isotype:	Mouse / IgG1
Clone:	TU-20
Immunogen:	Peptide (C) 441-448 coupled to maleimide-activated keyhole limpet hemocyanin via cysteine added to the N-terminus of the neuron-specific peptide
Format:	State: Liquid purified Ig fraction. Buffer System: PBS containing 15 mM Sodium Azide as preservative, approx. pH 7.4 Label: FITC – Conjugated with Fluorescein isothiocyanate under optimum conditions. The reagent is free of unconjugated
Applications:	Immunohistochemistry on Frozen and Paraffin Sections. Immunocytochemistry on Fixed and Permeabilized cells. Suggested working dilution is 1/40. The conjugate was also successfully used on FFPE Sections using Confocal Microscopy. The unconjugated antibody (BM170S/BM170) also works for: Flow cytometry. ELISA. Western Blot. Immunocytochemistry. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody recognizes the C-terminal peptide sequence ESESQGPK (aa 441-448) of human class III β -tubulin specific for neurones. The antibody is a highly specific marker for

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neuronal tissue. TU-20 is very useful for the detection of microtubule structures on fixed cells.

MAB TU-20 is widely cross-reactive among species (recognized epitope conserved within all species).

Storage:

Store the antibody in the dark at 2-8°C.

DO NOT FREEZE!

This product is photosensitive and should be protected from light.

Shelf life: one year from despatch.

General References:

1. Zikova M, Sulimenko V, Draber P, Draberova E.: Accumulation of 210 kDa microtubule-interacting protein in differentiating P19 embryonal carcinoma cells. *FEBS Lett.* 2000 May 4;473(1):19-23.
2. Draberova E, Lukas Z, Ivanyi D, Viklicky V, Draber P.: Expression of class III beta-tubulin in normal and neoplastic human tissues. *Histochem Cell Biol.* 1998 Mar;109(3):231-9.
3. Peknicova J, Kubatova A, Sulimenko V, Draberova E, Viklicky V, Hozak P, Draber P.: Differential subcellular distribution of tubulin epitopes in boar spermatozoa: recognition of class III beta-tubulin epitope in sperm tail. *Biol Reprod.* 2001 Sep;65(3):672-9.
4. Kukharsky V, Sulimenko V, Macurek L, Sulimenko T, Draberova E, Draber P.: Complexes of gamma-tubulin with nonreceptor protein tyrosine kinases Src and Fyn in differentiating P19 embryonal carcinoma cells. *Exp Cell Res.* 2004 Aug 1;298(1):218-28.
5. Jirasek T, Pisarikova E, Viklicky V, Mandys V.: Expression of class III beta-tubulin in malignant epithelial tumours: an immunohistochemical study using TU-20 and TuJ-1 antibodies. *Folia Histochem Cytobiol.* 2007;45(1):41-5.
6. Katsetos CD, Draberova E, Smejkalova B, Reddy G, Bertrand L, de Chadarevian J-P, Legido A, Nissanov J, Baas PW, Draber P.: Class III b-Tubulin and g-Tubulin are Co-expressed and form Complexes in Human Glioblastoma Cells. *Neurochem Res* (2007) 32:1387-1398.
7. Theodorou E, Dalembert G, Heffelfinger C, White E, Weissman S, Corcoran L, Snyder M: A high throughput embryonic stem cell screen identifies Oct-2 as a bifunctional regulator of neuronal differentiation. *Genes Dev.* 2009 Mar 1;23(5):575-88.
8. Jirásek T, Cipro S, Musilová A, Kubecová M, Mandys V: Expression of class III beta-tubulin in colorectal carcinomas: an immunohistochemical study using TU-20 & TuJ-1 antibody. *Indian J Med Res.* 2009 Jan;129(1):89-94.

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