Datasheet: MCA2047F

Description:	MOUSE ANTI TUBULIN BETA 3:FITC
Specificity:	TUBULIN BETA 3
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	TU-20
Isotype:	IgG1
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Immunofluorescence	▪			1/10 - 1/50

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species

Human

Species Cross Reactivity

Reacts with: Mouse, Baboon, Rat, Hamster, Pig, Bovine
N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

Preparation

Purified IgG prepared by DEAE chromatography from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% sodium azide (NaN_3)

Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Synthetic peptide, ESESQGPK, corresponding to amino acids 441-448 of human class III beta tubulin coupled to Keyhole Limpet Hemocyanin (KLH). This sequence is widely conserved across species.
External Database Links	**UniProt:** Q13509 Related reagents **Entrez Gene:** 10381 TUBB3 Related reagents
Synonyms	TUBB4
RRID	AB_2210681
Specificity	**Mouse anti Tubulin beta 3 antibody, clone TU-20** recognizes class III beta-tubulin, restricted to neuronal tissue (Leandro-García 2010; Katsetos 2003). Mouse anti Tubulin beta 3 antibody, clone TU-20 has been used to investigate tumors of neuronal origin (Jirásek 2002) including neuroblastoma (Prasannan 2000) and ganglioneuroma (Dráberová 1998). Class III beta tubulin is highly expressed in tumors of neuronal origin rather than in non-neuronal tumors (Person 2017).
References	1. Dráberová, E. *et al.* (1998) Expression of class III beta-tubulin in normal and neoplastic human tissues. Histochem Cell Biol. 109 (3): 231-9. 2. Pěknicová, J. *et al.* (2001) Differential subcellular distribution of tubulin epitopes in boar spermatozoa: recognition of class III beta-tubulin epitope in sperm tail. Biol Reprod. 65: 672-9. 3. Nicot, A. and DiCicco-Bloom, E. (2001) Regulation of neuroblast mitosis is determined by PACAP receptor isoform expression. Proc Natl Acad Sci U S A. 98: 4758-63. 4. Carey, R.G. *et al.* (2002) Pituitary adenylate cyclase activating polypeptide anti-mitogenic signaling in cerebral cortical progenitors is regulated by p57Kip2-dependent CDK2 activity. J Neurosci. 22 (5): 1583-91. 5. Vedin, V. *et al.* (2010) Organization of the chemosensory neuroepithelium of the vomeronasal organ of the Scandinavian moose *Alces alces*.. Brain Res. 1306: 53-61. 6. Knerlich-Lukoschus, F. *et al.* (2010) Chemokine expression in the white matter spinal cord precursor niche after force-defined spinal cord contusion injuries in adult rats. Glia. 58 (8): 916-31. 7. Huang, C.L. *et al.* (2010) Expression of ERCC1 and class III β-tubulin is associated with the survival of resected stage III non-small cell lung cancer patients treated with induction chemoradiotherapy using carboplatin-taxane. Exp Ther Med. 1: 445-51. 8. Hattermann, K. *et al.* (2010) The chemokine receptor CXCR7 is highly expressed in human glioma cells and mediates antiapoptotic effects. Cancer Res. 70: 3299-308. 9. Zhu, G. *et al.* (2012) Effects of neurotrophin-3 on the differentiation of neural stem cells

into neurons and oligodendrocytes. Neural Regen Res. 7 (19): 1483-7.
10. Rosito, M. *et al.* (2012) CXCL16 Orchestrates Adenosine A3 Receptor and MCP-1/CCL2 Activity to Protect Neurons from Excitotoxic Cell Death in the CNS. J Neurosci. 32: 3154-63.
11. Volkov, V.A. *et al.* (2013) Long tethers provide high-force coupling of the Dam1 ring to shortening microtubules. Proc Natl Acad Sci U S A. 110 (19): 7708-13.
12. Alexiou, G.A. *et al.* (2013) Supratentorial ependymomas in children: Analysis of nine cases. J Pediatr Neurosci. 8 (1): 15-8.
13. Tarasovetc, E.V. *et al.* (2021) Permitted and restricted steps of human kinetochore assembly in mitotic cell extracts. Mol Biol Cell. : mbcE20070461.

Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.
Guarantee	Guaranteed for 12 months from the date of despatch or until the date of expiry, whichever comes first. Please see label for expiry date.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA2047F 10040
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

North & South America Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com
Worldwide Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com
Europe Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M437834:250319'

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