

## Datasheet: MCA2047

**BATCH NUMBER 151213**

<b>Description:</b>	MOUSE ANTI TUBULIN BETA 3
<b>Specificity:</b>	TUBULIN BETA 3
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	TU-20
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen	▪			
Immunohistology - Paraffin (1)	▪			5 - 20 ug/ml
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting (2)	▪			1 - 10 ug/ml
Immunofluorescence	▪			

Where this antibody 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 antibody for use in their own system using appropriate negative/positive controls.

**(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.**

**(2) TU-20 recognizes tubulin beta 3 under reducing conditions**

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	<p>Reacts with: Mouse, Baboon, Rat, Hamster, Pig, Bovine</p> <p><b>N.B.</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.</p>

<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
<b>Immunogen</b>	<p>Synthetic peptide, ESESQGPK, corresponding to amino acids 441-448 of human class III beta tubulin coupled to Keyhole Limpet Hemocyanin (KLH).</p> <p>This sequence is widely conserved across species.</p>
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q13509</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">10381</a>    TUBB3    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	TUBB4
<b>RRID</b>	AB_2210682
<b>Specificity</b>	<p><b>Mouse anti Tubulin beta 3 antibody, clone TU-20</b> recognizes class III beta-tubulin, restricted to neuronal tissue (<a href="#">Leandro-García 2010</a>; <a href="#">Katsetos 2003</a>).</p> <p>Mouse anti Tubulin beta 3 antibody, clone TU-20 has been used to investigate tumors of neuronal origin (<a href="#">Jirásek 2002</a>) including neuroblastoma (<a href="#">Prasannan 2000</a>) and ganglioneuroma (<a href="#">Dráberová 1998</a>). Class III beta tubulin is highly expressed in tumors of neuronal origin rather than in non-neuronal tumors (<a href="#">Person 2017</a>).</p>
<b>Histology Positive Control Tissue</b>	Neuronal tissue
<b>References</b>	<ol style="list-style-type: none"> <li>1. Dráberová, E. <i>et al.</i> (1998) Expression of class III beta-tubulin in normal and neoplastic human tissues. <a href="#">Histochem Cell Biol. 109 (3): 231-9.</a></li> <li>2. Hattermann, K. <i>et al.</i> (2010) The chemokine receptor CXCR7 is highly expressed in human glioma cells and mediates antiapoptotic effects. <a href="#">Cancer Res. 70: 3299-308.</a></li> <li>3. Rosito, M. <i>et al.</i> (2012) CXCL16 Orchestrates Adenosine A3 Receptor and MCP-1/CCL2 Activity to Protect Neurons from Excitotoxic Cell Death in the CNS. <a href="#">J Neurosci. 32: 3154-63.</a></li> <li>4. Nicot, A. and DiCicco-Bloom, E. (2001) Regulation of neuroblast mitosis is determined by PACAP receptor isoform expression. <a href="#">Proc Natl Acad Sci U S A. 98: 4758-63.</a></li> </ol>

5. Pěkníková, 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.](#)
6. Huang, C.L. *et al.* (2010) Expression of ERCC1 and class III  $\beta$ -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.](#)
7. Yentur, S.P. *et al.* (2014) A decrease of regulatory T cells and altered expression of NK receptors are observed in subacute sclerosing panencephalitis. [Viral Immunol. 27 \(10\): 506-11.](#)
8. Alexiou, G.A. *et al.* (2013) Supratentorial ependymomas in children: Analysis of nine cases. [J Pediatr Neurosci. 8 \(1\): 15-8.](#)
9. 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.](#)
10. 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.](#)
11. 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.](#)
12. 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.](#)

---

**Storage**

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

---

**Guarantee**

12 months from date of despatch

---

**Health And Safety Information**

Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2047>  
10040

---

**Regulatory**

For research purposes only

---

## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>

Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)

Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

Goat Anti Mouse IgG (STAR77...) [HRP](#)

Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
----------------------------------	---	------------------	---	---------------	---

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)  
'M366101:200529'

Printed on 18 Jan 2024

---

© 2024 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)