

## Purified anti- $\beta$ -Tubulin Antibody

<b>Catalog# / Size</b>	605101 / 25 $\mu$ g 605102 / 100 $\mu$ g
<b>Clone</b>	O95C1
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Tubulin 5 $\beta$ , Tubulin $\beta$ -4 chain
<b>Isotype</b>	Mouse IgG2b, $\kappa$
<b>Description</b>	Eukaryotic microtubules are tubular polymers of tubulin that are a major component of the cytoskeleton. They play an essential role in diverse cellular functions, including migration, mitosis, and trafficking, and are also critical for normal development. $\beta$ - and $\alpha$ -tubulins comprise the two core protein families that heterodimerize and assemble into each microtubule filament. There are multiple $\beta$ - and $\alpha$ -tubulins isotypes, with each showing unique tumoral and tissue-specific distribution. TUBB4A is a $\beta$ -tubulin primarily expressed in nervous tissue and moderate expression in testis. Mutations in <i>TUBB4A</i> cause hypermyelinating leukodystrophy-6 and autosomal dominant torsion dystonia -4.

### Product Details

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<b>Verified Reactivity</b>	Mouse, Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Full length protein expressed in HEK293T cells transfected with human TUBB4 expression vector.
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C.
<b>Application</b>	<a href="#">WB - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">Western blotting</a> . For Western blotting, the suggested use of this reagent is 0.1 - 1.0 $\mu$ g per ml (1:500-1:5000 dilution). It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	Because of complete sequence homology, this clone is also predicted to recognize TUBB4A in higher eukaryotes, including rat, monkey, pig, bovine, and canine. This clone was generated using full-length recombinant TUBB4A as an immunogen. However, due to high sequence homology, this clone may also recognize other members of the $\beta$ -Tubulin family, notably TUBB2A, TUBB3, TUBB4B, and TUBB8. Because these $\beta$ -Tubulins have a similar molecular weight as TUBB4A, we do not recommend using this antibody as a TUBB4A-specific antibody. This clone was generated using a more defined immunogen (recombinant TUBB4A) than our existing $\beta$ -Tubulin clone, TU27/Tubulin (Cat. No. 903401), which was generated against taxol-assembled microtubules (mixed tubulins).
<b>Product Citations</b>	1. Ferreira D, <i>et al.</i> 2019. Sci Rep. 9:3958. <a href="#">PubMed</a>
<b>RRID</b>	AB_2728462 (BioLegend Cat. No. 605101) AB_2728463 (BioLegend Cat. No. 605102)

### Antigen Details

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<b>Structure</b>	TUBB4A is a 444 amino acid protein with a predicted molecular weight of 49.58 kD.
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<b>Distribution</b>	$\beta$ -Tubulins are ubiquitously expressed, with TUBB4A showing highest expression levels in brain and moderate expression in testis. TUBB4A shows low expression in other tissues.
<b>Function</b>	Cell migration, cell trafficking, mitosis, cilia and flagella motor dynamics.
<b>Biology Area</b>	Cell Biology, Cell Motility/Cytoskeleton/Structure, Neuroscience, Neuroscience Cell Markers
<b>Molecular Family</b>	Microtubules
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Arai-Ichinoi N, <i>et al.</i> 2016. <i>Hum. Genet.</i> 135: 89.</li> <li>2. Romaniello R, <i>et al.</i> 2015. <i>Brain Dev.</i> 37: 273.</li> <li>3. Shimojima K, <i>et al.</i> 2015. <i>Brain Dev.</i> 37: 281.</li> <li>4. Pizzino A, <i>et al.</i> 2014. <i>Neurology.</i> 83: 898.</li> <li>5. Tamura D, <i>et al.</i> 2013. <i>Cancer Med.</i> 2: 144.</li> <li>6. Hersheson J, <i>et al.</i> 2013. <i>Ann. Neurol.</i> 73: 546.</li> </ol>
<b>Gene ID</b>	<a href="#">10382</a>

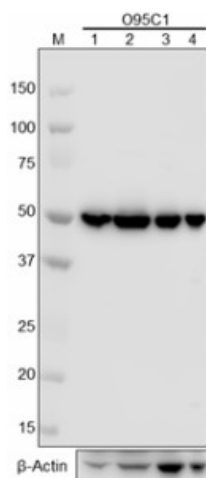
## Related Protocols

[Western Blotting Protocol](#)

## Other Formats

Purified anti- $\beta$ -Tubulin

## Product Data



Whole cell extracts (15  $\mu$ g total protein) prepared from HeLa (Lane 1), Jurkat (Lane 2), NTERA-2 (lane 3), and NIH/3T3 (Lane 4) cells were resolved by 4-20% Tris-Glycine gel electrophoresis, transferred to nitrocellulose, and probed with 0.1  $\mu$ g/mL (1:5000 dilution) purified anti- $\beta$ -Tubulin antibody (Clone O95C1). Proteins were visualized by chemiluminescence detection using HRP goat anti-mouse-IgG (Cat. No. 405301). Equal protein loading was confirmed using Direct-Blot™ HRP anti- $\beta$ -actin antibody (Cat. No. 643807) at a 1:5000 dilution (lower). Lane M: MW ladder.

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