

## Brilliant Violet 421™ anti-β-actin Antibody

<b>Catalog# / Size</b>	643806 / 100 µg
<b>Clone</b>	2F1-1
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Actin, cytoplasmic 1
<b>Isotype</b>	Mouse IgG2b, κ
<b>Description</b>	β-actin is a ubiquitously expressed and highly conserved 42 kD cytoplasmic protein involved in cell motility. This critical cytoskeletal component can be disrupted by drugs such as cytochalasin. Because β-actin is ubiquitously expressed in all eukaryotic cells, it is frequently used as a loading control for assays involving protein detection (such as Western blotting).

### Product Details

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<b>Verified Reactivity</b>	Human, Mouse, Rat
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions.
<b>Concentration</b>	0.2 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICC - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by immunocytochemistry. For immunocytochemistry, a concentration range of 0.1 - 10 µg/mL is recommended. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.</p> <p><a href="#">Learn more about Brilliant Violet™.</a></p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	The binding of this antibody to its target is sensitive to salt concentration. For consistent results, please use TBS/T buffer for Western blotting that contains 0.15 M NaCl as indicated in the BioLegend recommended <a href="#">protocol</a> .
<b>Application References</b>	<ol style="list-style-type: none"><li>1. Lawson BR, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:5366.</li><li>2. Joyce CW, <i>et al.</i> 2006. <i>J. Biol. Chem.</i> 281:33053.</li><li>3. Yanagiya T, <i>et al.</i> 2007. <i>Obesity.</i> 15:572.</li><li>4. Kishida T, <i>et al.</i> 2007. <i>J. Immunol.</i> 179:8554.</li><li>5. Ouimet M, <i>et al.</i> 2008. <i>Arterioscler Thromb Vasc Biol.</i> 28:1144.</li><li>6. Tóltit LJ, <i>et al.</i> 2008. <i>J. Immunol.</i> 181:2165.</li><li>7. Sawada. T, <i>et al.</i> 2008. <i>J. Biol. Chem.</i> 283:26820.</li><li>8. Ikeda D, <i>et al.</i> 2008. <i>Endocrinology.</i> 149:6037.</li></ol>
<b>(PubMed link indicates BioLegend citation)</b>	

9. Ikeda Y, *et al.* 2010. *Mol Endocrinol.* 24:1338. [PubMed](#)  
10. Kaieda S, *et al.* 2010. *J. Biol Chem.* 285:21478. [PubMed](#)  
11. Cambos M, *et al.* 2011. *J. Leukoc. Biol.* 89:157. [PubMed](#)

RRID AB\_2566300 (BioLegend Cat. No. 643806)

## Antigen Details

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<b>Structure</b>	Actin, cytoplasmic 1
<b>Distribution</b>	Ubiquitously expressed in the cytoplasm of all eukaryotic cells
<b>Function</b>	Actins are highly conserved proteins that are involved in cell motility
<b>Biology Area</b>	Cell Biology, Neuroscience, Neuroscience Cell Markers
<b>Molecular Family</b>	Microfilaments
<b>Antigen References</b>	1. Hanukoglu I, <i>et al.</i> 1983. <i>J. Mol. Biol.</i> 163:673. 2. Nakajima-Iijima S, <i>et al.</i> 1985. <i>Proc. Natl. Acad. Sci.</i> 82:6133. 3. Ponte P, <i>et al.</i> 1984. <i>Nucleic Acids Res.</i> 12:1687.
<b>Gene ID</b>	<a href="#">11461</a>

## Related Protocols

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[Immunocytochemistry Staining Protocol](#)

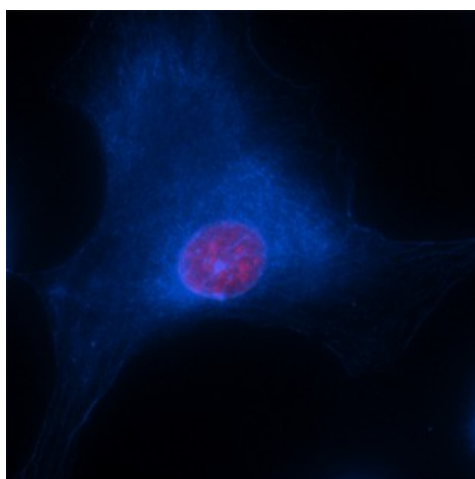
## Other Formats

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Alexa Fluor® 594 anti-β-actin, Purified anti-β-actin, Brilliant Violet 421™ anti-β-actin, Direct-Blot™ HRP anti-β-actin, Alexa Fluor® 647 anti-β-actin, Alexa Fluor® 488 anti-β-actin

## Product Data

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NIT/3T3 cells were fixed with 1% paraformaldehyde (PFA) for ten minutes then permeabilized with 0.5% triton X-100 for ten minutes followed by blocking with 5% FBS for 30 minutes. The cells were stained with 2.5 μg/mL of anti-β-actin antibody (clone 2F1-1) Brilliant Violet 421™ (blue) in blocking buffer overnight at 4°C. Nuclei were counterstained with DRAQ7 and are shown in red. The image was captured with a 40X objective.

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