

Alexa Fluor[®] 647 anti- β -actin Antibody

Catalog# / Size	643810 / 100 μ g
Clone	2F1-1
Regulatory Status	RUO
Other Names	Actin, cytoplasmic 1
Isotype	Mouse IgG2b, κ
Description	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

Verified Reactivity	Human, Mouse, Rat
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor [®] 647 under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	IHC-P - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 1.25 - 5.0 μg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor[®] 647 has a maximum emission of 668 nm when it is excited at 633 nm / 635 nm.</p> <p>Alexa Fluor[®] and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Red Laser (633 nm)
Application Notes	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 protocol .
Application References	<ol style="list-style-type: none">1. Lawson BR, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:5366.2. Joyce CW, <i>et al.</i> 2006. <i>J. Biol. Chem.</i> 281:33053.3. Yanagiya T, <i>et al.</i> 2007. <i>Obesity.</i> 15:572.4. Kishida T, <i>et al.</i> 2007. <i>J. Immunol.</i> 179:8554.5. Ouimet M, <i>et al.</i> 2008. <i>Arterioscler Thromb Vasc Biol.</i> 28:1144.6. Tótlit LJ, <i>et al.</i> 2008. <i>J. Immunol.</i> 181:2165.7. Sawada. T, <i>et al.</i> 2008. <i>J. Biol. Chem.</i> 283:26820.8. Ikeda D, <i>et al.</i> 2008. <i>Endocrinology.</i> 149:6037.9. Ikeda Y, <i>et al.</i> 2010. <i>Mol Endocrinol.</i> 24:1338. PubMed10. Kaieda S, <i>et al.</i> 2010. <i>J. Biol Chem.</i> 285:21478. PubMed11. Cambos M, <i>et al.</i> 2011. <i>J. Leukoc. Biol.</i> 89:157. PubMed
(PubMed link indicates BioLegend citation)	
RRID	AB_2632718 (BioLegend Cat. No. 643810)

Antigen Details

Structure	Actin, cytoplasmic 1
Distribution	Ubiquitously expressed in the cytoplasm of all eukaryotic cells
Function	Actins are highly conserved proteins that are involved in cell motility
Biology Area	Cell Biology, Neuroscience, Neuroscience Cell Markers
Molecular Family	Microfilaments
Antigen References	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.
Gene ID	11461

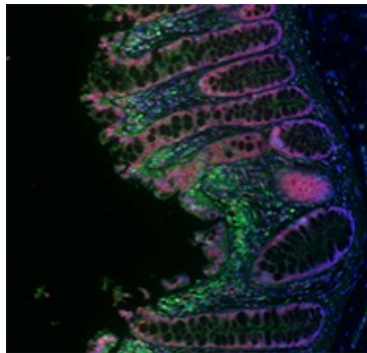
Related Protocols

[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

Other Formats

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



Human paraffin-embedded colon tissue slices were prepared with a standard protocol of deparaffination and rehydration. Antigen retrieval was done with Tris-Buffered Saline 20X (1.0M, pH7.4) at 95°C for 40 minutes. Tissue was washed with PBS/ 0.05% Tween20 twice for five minutes, permeabilized with 0.5% Triton X-100 for ten minutes and blocked with 5% FBS and 0.2% gelatin for 30 minutes. Then, the tissue was stained with 5 µg/ml of anti-β-actin (clone 2F1-1) Alexa Fluor® 647 (green) and anti-mouse/human CD44 (clone IM7) Alexa Fluor® 594 (red) at 4°C overnight. Nuclei were counterstained with DAPI (blue). The image was captured with a 10X objective.

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