

Alexa Fluor® 647 anti-DBN1 Antibody

Catalog# / Size	633253 / 25 µg 633254 / 100 µg
Clone	W21139F
Regulatory Status	RUO
Other Names	DBN-1, DBN 1, D0S117E; Developmentally-regulated brain protein; Drebrin 1; Drebrin; Drebrin E; Drebrin E2; DKFZp434D064
Isotype	Rat IgG2b, κ
Description	Drebrin (DBN1) is an actin-binding protein that was identified as a developmentally regulated protein expressed in the brain. Drebrin interacts with microtubules and is localized to focal adhesions, adherens junctions, gap junctions, immunological synapses, and neuronal synapses to modulate cellular processes such as cell migration, cell process formation, cancer metastasis, and spermatogenesis. There are two isoforms of mammals as a result of alternative splicing: Drebrin A (adult) and Drebrin E (embryonic). The expression of Drebrin A is highly specific to neurons and regulates the reorganization of actin filaments and thus contributes to memory, whereas Drebrin E is expressed in various tissues. Studies have shown that a decrease in the amount of Drebrin protein in the brain is thought to be a factor contributing to the pathogenesis of dementia in Alzheimer's disease (AD), Down syndrome (DS), and bipolar disorder (BD).

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Partial recombinant human DBN1 protein
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	ICC - Quality tested ICFC - Verified
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunocytochemistry. For immunocytochemistry, a concentration range of 1.0 - 5.0 µg/mL is recommended. For flow cytometric staining, the suggested range of this reagent is 0.125 - 0.25 µg/mL µg per million cells in 100 µL volume. 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	<p>For immunocytochemistry (ICC), we recommend to use 4% PFA fixation followed by permeabilization with 0.5% Triton X-100 or ice cold-methanol, or ice-cold methanol fixation.</p> <p>For intracellular flow cytometry (ICFC), the recommended dosage is 0.25 µg per test using Fixation Buffer (Cat. No. 420801) followed by True- Phos™ Perm Buffer (Cat No. 425401), or Intracellular Staining Permeabilization Wash Buffer (Cat No. 421002), or using Cyto-Fast™ Fix/Perm Buffer Set (Cat. No. 426803) and True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401).</p>

This product is not recommended for use in immunohistochemistry (IHC).

Additional Product Notes This antibody has been tested in knockout/knockdown models for ICC.

RRID AB_3683478 (BioLegend Cat. No. 633253)
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Antigen Details

Structure	DBN1 protein is a 649 amino acid protein with a predicted molecular weight of 71 kD.
Distribution	Expressed in the brain, the heart, lymphocytes, placenta, lung, skeletal muscle, kidney, pancreas, skin fibroblasts, gingival fibroblasts, and bone-derived cells
Function	Cytoplasmic actin-binding protein, regulate dendritic spine morphogenesis and organization
Interaction	RUFY3, CXCR4, ZMYND8
Cell Type	Endothelial cells, Lymphocytes, Monocytes, Platelets
Biology Area	Immunology
Molecular Family	Adhesion Molecules, CD Molecules

Antigen References

1. Kojima N, *et al.* 1993. *Brain Res Mol Brain Res.* 19:101-14.
2. Ishikawa R, *et al.* 1994. *J Biol Chem.* 269:29928-33.
3. Butkevich E, *et al.* 2004. *Curr Biol.* 14:650-8.
4. Shirao T, *et al.* 2017. *J Neurochem.* 141:819-834.
5. Peitsch WK, *et al.* 1999. *Eur J Cell Biol.* 78:767-78.
6. Li MW, *et al.* 2011. *Spermatogenesis.* 1:123-136.
7. Geraldo S, *et al.* 2008. *Nat Cell Biol.* 10:1181-9.
8. Grintsevich EE, *et al.* 2017. *Adv Exp Med Biol.* 1006:61-82.
9. Stiber J.A, *et al.* 2016. *Arterioscler Thromb Vasc Biol.* 36:984-93.
10. Shim K.S, *et al.* 2002. *Neurosci Lett.* 324:209-12.
11. Kim H.W, *et al.* 2010. *Neurobiol Dis.* 37:596-603.

Gene ID [1627](#)

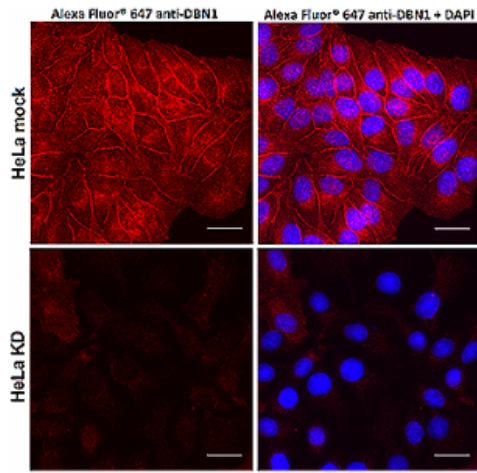
Related Protocols

- [Immunocytochemistry Staining Protocol](#)
- [Intracellular Flow Cytometry Staining Protocol](#)

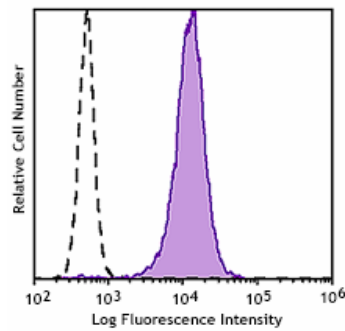
Other Formats

Purified anti-DBN1, Alexa Fluor® 647 anti-DBN1 Antibody

Product Data



HeLa and HeLa shRNA knockdown cells were fixed with ice-cold methanol, and then blocked with 5% FBS for 1 hour at room temperature. Cells were intracellularly stained with Alexa Fluor® 647 anti-DBN1 (clone W21139F). Nuclei were counterstained with DAPI (Cat. No. 422801). The image was captured with a 40X objective. Scale bar: 25 µm



HEK293T cells were fixed with Fixation Buffer (Cat. No. 420801), permeabilized with 1X Intracellular Staining Permeabilization Wash buffer (Cat. No. 421002), then intracellularly stained with Alexa Fluor® 647 anti-DBN1 (clone W21139F) (filled histogram) or Alexa Fluor® 647 Rat IgG2b, κ Isotype Control (Cat. No. 400626) (open histogram).

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8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587