Datasheet for ABIN968244

anti-Calretinin antibody (AA 38-151)

3 Images | 6 Publications

Go to Product page

Overview

Quantity:	50 µg
Target:	Calretinin (CALB2)
Binding Specificity:	AA 38-151
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Calretinin antibody is un-conjugated
Application:	Western Blotting (WB), BioImaging (BI)

Product Details

Immunogen:	Rat Calretinin aa. 38-151
Clone:	34-Calretinin
Isotype:	IgG1
Cross-Reactivity:	Human, Mouse (Murine)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. This antibody has been developed and certified for the bioimaging application. However, a routine bioimaging test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance. 3. Triton is a trademark of the Dow Chemical Company. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States. 5. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide

Product Details

	compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 6. Please refer to us for technical protocols.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	Calretinin (CALB2)
Alternative Name:	Calretinin (CALB2 Products)
Background:	A low level of intracellular free Ca2+ is essential for a variety of cellular functions and is mediated by the sequestration of Ca2+ in the ER, by the action of plasma membrane Ca2+ pumps, and by Ca2+ binding proteins. The Ca2+ binding protein, Calretinin, is a member of the calmodulin superfamily whose members promote calcium homeostasis by acting as buffers of intracellular free Ca2+. Although Calretinin is expressed in certain populations of neurons throughout the central and peripheral nervous systems, it is primarily expressed in the olfactory bulb and auditory pathways. Calretinin most closely resembles calbindin D28k, another member of the calmodulin family. These two proteins share 58% amino acid identity and contain six EF-hand Ca2+ binding motifs. Excess Calretinin or calbindin results in decreased transcription from PCE1, a calcium responsive element in the calmodulin II promoter. This supports the role of Calretinin as a regulator of intracellular free Ca2+ levels. Furthermore, truncated forms of Calretinin have been found in certain tumor cells, but are absent from normal cells which express wild type Calretinin. Thus, these isoforms may have a role in tumorigenesis.
Molecular Weight:	29 kDa

Application Details

Application Notes:	Bioimaging 1. Seed the cells in appropriate culture medium at ~10,000 cells per well in an 96-well Imaging Plate and culture overnight. 2. Remove the culture medium from the wells, and fix the cells by adding 100 myl of Fixation Buffer to each well. Incubate for 10 minutes at room temperature (RT). 3. Remove the fixative from the wells, and permeabilize the cells using either 90% methanol, or Triton™ X-100: a. Add 100 myl of -20°C 90% methanol to each well and incubate for 5 minutes

Application Details

	at RT. OR b. Add 100 myl of 0.1% Triton™ X-100 to each well and incubate for 5 minutes at RT. 4. Remove the permeabilization buffer, and wash the wells twice with 100 myl of 1× PBS. 5. Remove the PBS, and block the cells by adding 100 myl of to each well. Incubate for 30 minutes at RT. 6. Remove the blocking buffer and add 50 myl of the optimally titrated primary antibody (diluted in Stain Buffer) to each well, and incubate for 1 hour at RT. 7. Remove the primary antibody, and wash the wells three times with 100 myl of 1× PBS. 8. Remove the PBS, and add the second step reagent at its optimally titrated concentration in 50 myl to each well, and incubate in the dark for 1 hour at RT. 9. Remove the second step reagent, and wash the wells three times with 100 myl of 1× PBS. 10. Remove the PBS, and counter-stain the nuclei by adding 200 myl per well of 2 myg/ml Hoechst 33342 in 1× PBS to each well at least 15 minutes before imaging. 11. View and analyze the cells on an appropriate imaging instrument.
Comment:	Related Products: ABIN967389, ABIN968545
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

Product cited in:	Chua, Fletcher, Kalloniatis: "Functional remodeling of glutamate receptors by inner retinal neurons occurs from an early stage of retinal degeneration." in: **The Journal of comparative neurology**, Vol. 514, Issue 5, pp. 473-91, (2009) (PubMed). Acosta, Bumsted OBrien, Tan, Kalloniatis: "Emergence of cellular markers and functional

ionotropic glutamate receptors on tangentially dispersed cells in the developing mouse retina." in: **The Journal of comparative neurology**, Vol. 506, Issue 3, pp. 506-23, (2008) (PubMed).

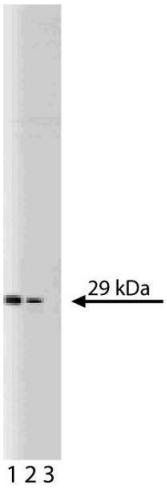
Arnold, Heintz: "A calcium responsive element that regulates expression of two calcium binding proteins in Purkinje cells." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 94, Issue 16, pp. 8842-7, (1997) (PubMed).

Schurmans, Schiffmann, Gurden, Lemaire, Lipp, Schwam, Pochet, Imperato, Böhme, Parmentier : "Impaired long-term potentiation induction in dentate gyrus of calretinin-deficient mice." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 94, Issue 19, pp. 10415-20, (1997) (PubMed).

Schwaller, Durussel, Jermann, Herrmann, Cox: "Comparison of the Ca2+-binding properties of human recombinant calretinin-22k and calretinin." in: **The Journal of biological chemistry**, Vol. 272, Issue 47, pp. 29663-71, (1997) (PubMed).

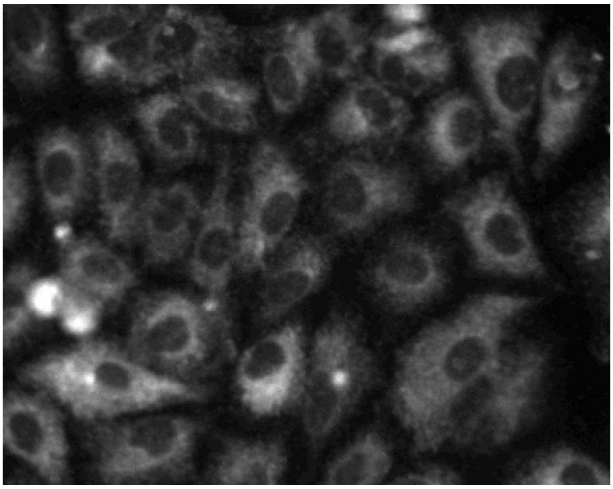
There are more publications referencing this product on: Product page

Images



Western Blotting

Image 1. Western blot analysis of Calretinin on a rat cerebrum lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the Mouse Anti-Calretinin antibody.



Immunofluorescence

Image 2. Immunofluorescent staining of A549 (ATCC CCL-185) cells. Cells were seeded in a 96 well imaging plate at ~ 10 000 cells per well. After overnight incubation, cells were stained using the alcohol perm protocol and the Mouse Anti-Calretinin antibody. The second step reagent was FITC goat anti mouse Ig. Images were taken on a BD Pathway™ 855 bioimaging system using a 20x objective. This antibody also stained HeLa (ATCC CCL-2) cells using the alcohol perm protocol and A549, HeLa and U-2 OS (ATCC HTB-96) cells using the Triton™ X-100 fix/perm protocol.

Image 3.