

Datasheet for ABIN7043014

anti-CALHM1 antibody (Intracellular) (Atto 594)



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2 Images

Overview

Quantity:	50 µL
Target:	CALHM1
Binding Specificity:	AA 252-265, Intracellular
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CALHM1 antibody is conjugated to Atto 594
Application:	Immunohistochemistry (IHC), Immunofluorescence (IF), Immunochromatography (IC)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to Calcium Homeostasis Modulator 1 Conjugated to the Fluorescent Dye ATTO-594
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)EAMNHDLELGHTHG, corresponding to amino acid residues 252-265 of human CALHM1
Isotype:	IgG
Specificity:	Intracellular, C-terminus
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Rat,mouse - identical
Characteristics:	Anti-CALHM1 Antibody (ABIN7043013, ABIN7044044 and ABIN7044045)) is a highly specific

Product Details

antibody directed against an epitope of the human calcium homeostasis modulator protein 1. The antibody can be used in western blot and immunohistochemistry applications. It has been designed to recognize CALHM1 from rat, mouse, and human samples. \nAnti-CALHM1-ATTO Fluor-594 Antibody (#ABIN7043014) is directly labeled with an ATTO-594 fluorescent dye. ATTO dyes are characterized by strong absorption (high extinction coefficient), high fluorescence quantum yield, and high photo-stability. The ATTO-594 fluorescent label belongs to the class of Rhodamine dyes and can be used with fluorescent equipment typically optimized to detect Texas Red and Alexa-594. Anti-CALHM1-ATTO Fluor-594 Antibody has been tested in immunohistochemistry applications and is especially suited for experiments requiring simultaneous labeling of different markers.

Purification: Affinity purified on immobilized antigen.

Target Details

Target: CALHM1

Alternative Name: CALHM1 ([CALHM1 Products](#))

Background: Calcium homeostasis modulator 1, FAM26C, A misbalance in Ca²⁺ homeostasis seems to be related to the development of Alzheimer's disease (AD). Indeed Neuronal Ca²⁺ balance may affect the levels of proteins associated with AD, such as amyloid-beta (Ab) and tau1. Calcium homeostasis modulator 1 (CALHM1) is a cerebral Ca²⁺ channel component responsible for controlling intracellular Ca²⁺ levels and Ab metabolism^{2,3}. CALHM1 is a three transmembrane glycoprotein, mostly localized to the endoplasmic reticulum (ER) although it can be detected at the plasma membrane. A functional channel is formed by multiple subunits which has some structural similarities to the NMDA receptor. It is expressed in all brain regions¹. In cultured cells, overexpression of CALHM1 increases intracellular Ca²⁺ levels and reduces Ab accumulation, thereby reinforcing its implication in the development of AD. Indeed, a polymorphism in the gene was found to affect the onset of AD².

Alternative names: CALHM1, Calcium homeostasis modulator 1, FAM26C

Gene ID: 255022

NCBI Accession: [NM_001001412](#)

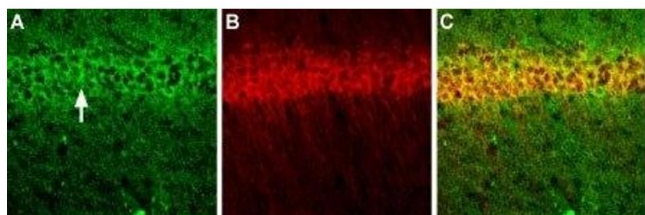
UniProt: [Q8IU99](#)

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:200 Application Dilutions Western blot wb: N/A
Comment:	Negative Control: BLP-CC101 Blocking Peptide: BLP-CC101
Restrictions:	For Research Use only

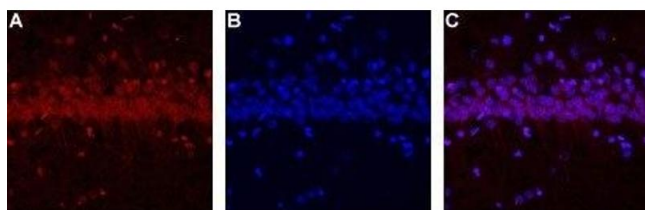
Handling

Format:	Lyophilized
Reconstitution:	50 µL double distilled water (DDW).
Concentration:	0.8 mg/mL
Buffer:	PBS pH 7.4, 1 % BSA with 0.05 % 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:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C, protected from the light, for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).



Immunohistochemistry

Image 1. Multiplex staining of GluN1 and CALHM1 in mouse hippocampal CA1 region - Immunohistochemical staining of perfusion-fixed frozen mouse brain sections using Anti-NMDAR1 (GluN1) (extracellular) Antibody (ABIN7043242, ABIN7044322 and ABIN7044323), (1:200) and Anti-CALHM1-ATTO Fluor-594 Antibody (ABIN7043014), (1:60). A. Sections were stained with Anti-NMDAR1 (GluN1) (extracellular) Antibody, followed by goat-anti-rabbit-Cy2 (green). Staining reveals expression in neurons of the pyramidal layer (an arrow points at the layer). B. The same section was incubated with Anti-CALHM1-ATTO Fluor-594 Antibody, (red). C. Merge of the two images demonstrates colocalization of GluN1 and CALHM1 in pyramidal neurons.



Immunohistochemistry

Image 2. Expression of CALHM1 in rat hippocampus - Immunohistochemical staining of rat hippocampus using Anti-CALHM1-ATTO Fluor-594 Antibody (ABIN7043014). A. Staining of CALHM1 appears only in the hippocampal CA1 pyramidal layer. B. Nuclear staining using DAPI as the counterstain. C. Merge of A and B.