Datasheet for ABIN7043553

anti-Presenilin 1 antibody (AA 345-359) (Atto 488)

2 Images

Go to Product page

Overview

Quantity:	50 µL
Target:	Presenilin 1 (PSEN1)
Binding Specificity:	AA 345-359
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Presenilin 1 antibody is conjugated to Atto 488
Application:	Immunohistochemistry (IHC), Immunofluorescence (IF)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to Presenilin-1 Conjugated to the Fluorescent Dye ATTO-488
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)RDSHLGPHRSTPESR, corresponding to amino acid residues 345-359 of rat Psen1
Isotype:	IgG
Specificity:	3rd cytoplasmic loop (at the Psen1 CTF subunit)
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Mouse,human - identical
Characteristics:	Anti-Presenilin-1 Antibody (ABIN7043552, ABIN7044524 and ABIN7044525) is a highly specific antibody directed against an epitope of the rat protein. The antibody can be used in western

Product Details

	blot and immunohistochemistry applications. It has been designed to recognize PSEN1 from rat, mouse, and human samples. \nAnti-Presenilin-1-ATTO Fluor-488 Antibody (ABIN7043553) is directly labeled with fluorescent dye. ATTO dyes are characterized by strong absorption (high extinction coefficient), high fluorescence quantum yield, and high photo-stability. The label is analogous to fluorescein isothiocyanate (FITC) and can be used with filters typically used to detect FITC. Anti-Presenilin-1-ATTO Fluor-488 Antibody has been tested in immunohistochemistry applications and is specially suited to experiments requiring simultaneous labeling of different markers.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	Presenilin 1 (PSEN1)
Alternative Name:	PSEN1 (PSEN1 Products)
Background:	PSEN1, PS-1, Psnl1,Presenilin-1 (PSEN1) is a transmembrane protein encoded by the PS1 gene. The protein is comprised of 9 transmembrane domains. The N- and C-termini of the protein are cytosolic and lumenal respectively. PSEN1, together with three other proteins- nicastrin, presenilin enhancer 2 and anterior pharynx-defective 1 form a protein complex named γ-Secretase. PSEN1 serves as the catalytic subunit of the γ-secretase complex. This complex, along with α- and β-secretases cleaves the amyloid precursor protein (APP). APP is the precursor for β-Amyloid fibrils which are the pathological hallmark of Alzheimer's disease (AD) and mutations in the PSEN1 gene have been implicated in AD pathophysiology. Currently, it remains unclear whether PSEN1 mutations cause disease by a loss of function or a gain of toxic function mechanism1.PS1 mutations causing an overexpression of mutant human PSEN1 also increase the expression of ryanodine receptor 3 in PC12 cells. In addition, PC12 and cortical neuron cells expressing mutant PSEN1 exhibit increased calcium responses to caffeine compared with cells expressing wildtype PSEN1. This enhanced release of calcium is associated with increased cell vulnerability to β-Amyloid and caffeine induced cellular death. It has been hypothesized that PSEN1 and RyR interact directly2.PS1 mutations also enhance inositol triphosphate (IP3)-mediated Ca2+ release in non-excitable and excitable cells. IP3-evoked Ca2+ responses are more than threefold greater in PS1M146V knock-in mice relative to non-transgenic controls. These mutations specifically disrupt intracellular Ca2+ release rather than reduce cytosolic Ca2+ buffering or clearance3. Alternative names: Presenilin-1, PSEN1, PS-1, Psnl1

Target Details

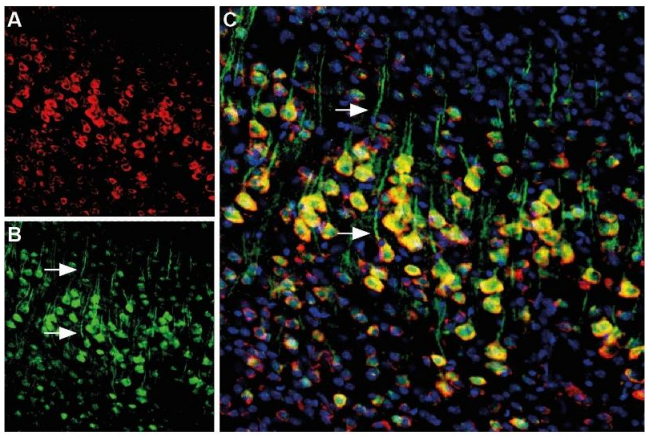
Gene ID:	29192
NCBI Accession:	NM_000021
UniProt:	P97887
Pathways:	Notch Signaling, EGFR Signaling Pathway, Synaptic Vesicle Exocytosis, Dicarboxylic Acid Transport

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:60 Application Dilutions Western blot wb: N/A
Comment:	Negative Control: (ABIN7582041) Blocking Peptide: (ABIN7236593)
Restrictions:	For Research Use only

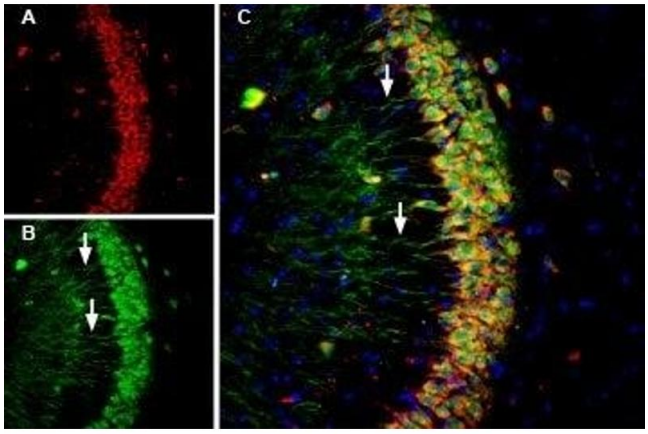
Handling

Format:	Lyophilized
Reconstitution:	50 µL double distilled water (DDW).
Concentration:	1 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 Calnexin and Presenilin-1 in mouse cortex - Immunohistochemical staining of perfusion-fixed frozen mouse parietal cortex sections using Anti-Presenilin-1-ATTO Fluor-488 Antibody (ABIN7043553), (1:60) and Anti-Calnexin-ATTO Fluor-594 Antibody (ABIN7043022), (1:60). A. Calnexin staining (red) appears in neuronal profiles. B. Presenilin-1 staining (green) in the same section appears in neuronal profiles and apical dendrites (arrows). C. Merger of A and B demonstrates colocalization in several neurons (arrows). Cell nuclei are stained using DAPI (blue) as the counterstain. Images were acquired with 25x objective.



Immunohistochemistry

Image 2. Multiplex staining of Calnexin and Presenilin-1 in mouse hippocampus - Immunohistochemical staining of perfusion-fixed frozen mouse hippocampal sections using Anti-Presenilin-1-ATTO Fluor-488 Antibody (ABIN7043553), (1:60) and Anti-Calnexin-ATTO Fluor-594 Antibody (ABIN7043022), (1:60). A. Calnexin staining (red) appears in neuronal profiles. B. Presenilin-1 staining (green) in the same section appears in neuronal profiles and apical dendrites (arrows). C. Merger of A and B demonstrates colocalization in several neurons (arrows). Cell nuclei are stained using DAPI (blue) as the counterstain. Images were acquired with 25x objective.