Datasheet for ABIN7043552

anti-Presenilin 1 antibody (AA 345-359)

2 Images

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Overview

Quantity:	25 µL
Target:	Presenilin 1 (PSEN1)
Binding Specificity:	AA 345-359
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Presenilin 1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to Presenilin-1
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.
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
Gene ID:	29192
NCBI Accession:	NM_000021
UniProt:	P97887
Pathways:	Notch Signaling, EGFR Signaling Pathway, Synaptic Vesicle Exocytosis, Dicarboxylic Acid Transport

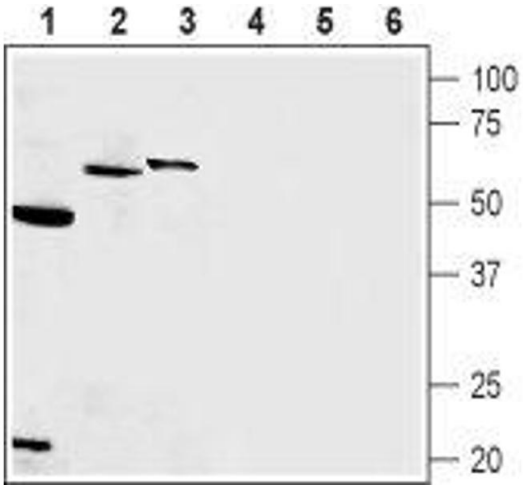
Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:600 Application Dilutions Western blot wb: 1:500
Comment:	Negative Control: (ABIN7236593) Blocking Peptide: (ABIN7236593)
Restrictions:	For Research Use only

Handling

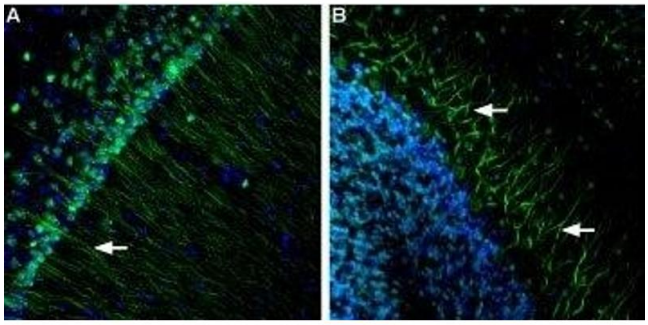
Format:	Lyophilized
Reconstitution:	0.2 mL double distilled water (DDW).
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C 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).

Images



Western Blotting

Image 1. Western blot analysis of rat pancreas membrane (lanes 1 and 4), rat hippocampus (lanes 2 and 5) and mouse pancreatic cancer cell line (MS1) (lanes 3 and 6): - 1-3. Anti-Presenilin-1 Antibody (ABIN7043552, ABIN7044524 and ABIN7044525), (1:500).4-6. Anti-Presenilin-1 Antibody, preincubated with Presenilin-1 Blocking Peptide (#BLP-IP011).



Immunohistochemistry

Image 2. Expression of Presenilin-1 in mouse brain - Immunohistochemical staining of mouse hippocampus and mouse cerebellum using Anti-Presenilin-1 Antibody (ABIN7043552, ABIN7044524 and ABIN7044525), (1:600). A. In hippocampus, PS-1 staining (green) appears in apical dendrites of pyramidal neurons (arrows). B. In cerebellum, an intense staining for PS-1 (green) appears in dendritic trees of Purkinje cells (arrows). A moderate staining is detected in the granule layer and in the soma of Purkinje and molecular layer interneurons. In both panels DAPI is used as the counterstain.