abcam

Product datasheet

Anti-Presenilin 1/PS-1 (phospho S357) antibody ab78914

2 References 2 Images

Overview

Product name	Anti-Presenilin 1/PS-1 (phospho S357) antibody
Description	Rabbit polyclonal to Presenilin 1/PS-1 (phospho S357)
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat
Immunogen	Synthetic peptide corresponding to Human Presenilin 1/PS-1.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 50% Glycerol (glycerin, glycerine), 0.87% Sodium chloride, PBS Without Mg2+ and Ca2+
Purity	Immunogen affinity purified
Purification notes	ab78914 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab78914 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/1000. Predicted molecular weight: 53 kDa.
IHC-P		1/50 - 1/100.

Target

Function Probable catalytic subunit of the gamma-secretase complex, an endoprotease complex that catalyzes the intramembrane cleavage of integral membrane proteins such as Notch receptors and APP (beta-amyloid precursor protein). Requires the other members of the gamma-secretase complex to have a protease activity. May play a role in intracellular signaling and gene expression or in linking chromatin to the nuclear membrane. Stimulates cell-cell adhesion though its association with the E-cadherin/catenin complex. Under conditions of apoptosis or calcium influx, cleaves E-cadherin promoting the disassembly of the E-cadherin/catenin complex and increasing the pool of cytoplasmic beta-catenin, thus negatively regulating Wnt signaling. May also play a role in hematopoiesis.

Tissue specificity Expressed in a wide range of tissues including various regions of the brain, liver, spleen and lymph nodes.

Involvement in disease Defects in PSEN1 are a cause of Alzheimer disease type 3 (AD3) [MIM:607822]. AD3 is a familial early-onset form of Alzheimer disease. Alzheimer disease is a neurodegenerative disorder characterized by progressive dementia, loss of cognitive abilities, and deposition of fibrillar amyloid proteins as intraneuronal neurofibrillary tangles, extracellular amyloid plaques and vascular amyloid deposits. The major constituent of these plaques is the neurotoxic amyloid-beta-APP 40-42 peptide (s), derived proteolytically from the transmembrane precursor protein APP by sequential secretase processing. The cytotoxic C-terminal fragments (CTFs) and the caspase-cleaved products such as C31 derived from APP, are also implicated in neuronal death.
Defects in PSEN1 are a cause of frontotemporal dementia [MIM:600274].
Defects in PSEN1 are the cause of cardiomyopathy dilated type 1U (CMD1U) [MIM:613694]. It is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death.
Defects in PSEN1 are the cause of acne inversa familial type 3 (ACNIF3) [MIM:613737]. A chronic relapsing inflammatory disease of the hair follicles characterized by recurrent draining sinuses, painful skin abscesses, and disfiguring scars. Manifestations typically appear after puberty.

Sequence similarities Belongs to the peptidase A22A family.

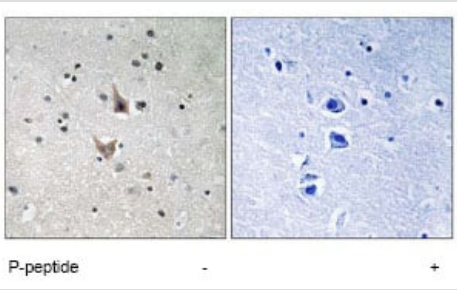
Domain The PAL motif is required for normal active site conformation.

Post-translational modifications Heterogeneous proteolytic processing generates N-terminal (NTF) and C-terminal (CTF) fragments of approximately 35 and 20 kDa, respectively. During apoptosis, the C-terminal fragment (CTF) is further cleaved by caspase-3 to produce the fragment, PS1-CTF12.
After endoproteolysis, the C-terminal fragment (CTF) is phosphorylated on serine residues by PKA and/or PKC. Phosphorylation on Ser-346 inhibits endoproteolysis.

Cellular localization Endoplasmic reticulum membrane. Golgi apparatus membrane. Cell surface. Bound to NOTCH1

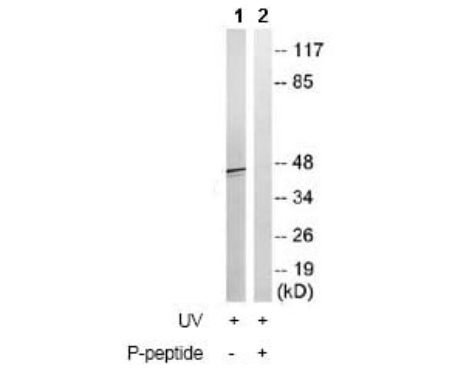
also at the cell surface. Colocalizes with CDH1/2 at sites of cell-cell contact. Colocalizes with CTNNB1 in the endoplasmic reticulum and the proximity of the plasma membrane. Also present in azurophil granules of neutrophils.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Presenilin 1/PS-1 (phospho S357) antibody (ab78914)

ab78914 at 1/50 dilution staining Presenilin 1/PS-1 in human brain by Immunohistochemistry using paraffin-embedded tissue, in the absence or presence of the immunising phosphopeptide.



Western blot - Anti-Presenilin 1/PS-1 (phospho S357) antibody (ab78914)

All lanes : Anti-Presenilin 1/PS-1 (phospho S357) antibody (ab78914) at 1/500 dilution

Lane 1 : RAW264.7 cell extracts, treated with UV (5mins)
Lane 2 : RAW264.7 cell extracts, treated with UV (5mins) with immunising phosphopeptide at 10 µg

Lysates/proteins at 30 µg per lane.

Predicted band size: 53 kDa
Observed band size: 46 kDa

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