

Product datasheet

Anti-Presenilin 1/PS-1 (phospho S310) antibody [EP2001Y] α b76131

Recombinant RabMAb

★★★★★ [1 Abreviews](#) [1 Image](#)

Overview

Product name	Anti-Presenilin 1/PS-1 (phospho S310) antibody [EP2001Y]
Description	Rabbit monoclonal [EP2001Y] to Presenilin 1/PS-1 (phospho S310)
Host species	Rabbit
Tested applications	Suitable for: WB Unsuitable for: Flow Cyt, IHC-P or IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa (Human cervix adenocarcinoma epithelial cell), starve overnight, HeLa (Human cervix adenocarcinoma epithelial cell), starve overnight, treated with 200nM TPA for 4 hours.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>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.</p> <p>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</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EP2001Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab76131 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)	1/1000. Predicted molecular weight: 20 kDa.

Application notes Is unsuitable for Flow Cyt, IHC-P or IP.

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 through 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.

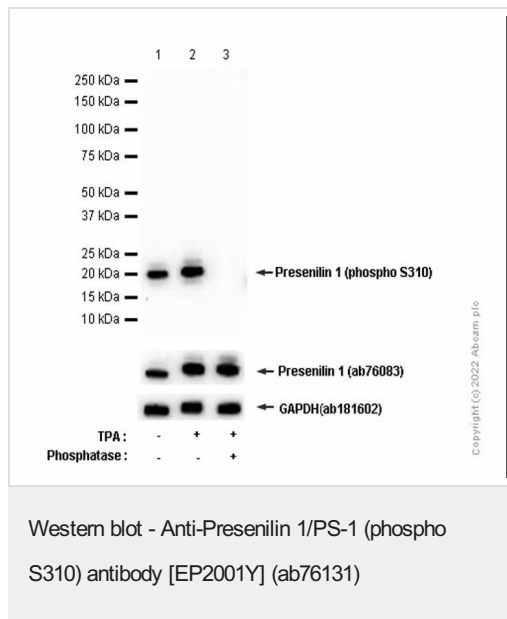
Post-translational modifications

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



All lanes : Anti-Presenilin 1/PS-1 (phospho S310) antibody [EP2001Y] (ab76131) at 1/1000 dilution

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell), starve overnight, whole cell lysate

Lane 2 : HeLa (Human cervix adenocarcinoma epithelial cell), starve overnight, treated with 200nM TPA for 4 hours whole cell lysate

Lane 3 : HeLa (Human cervix adenocarcinoma epithelial cell), starve overnight, treated with 200nM TPA for 4 hours. Then the membrane treated with Alkaline phosphatase

Lysates/proteins at 15 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 20 kDa

Exposure time: 40 seconds

Blocking and diluting buffer and concentration: 5% NFDN/TBST.

Primary antibody: incubated for 1h at room temperature.

Secondary antibody: incubated for 1h at room temperature.

ab181602 was used as a loading control.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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