

**Presenilin 1 Antibody**  
Rabbit mAb  
Catalog # AP91678

## Specification

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### Presenilin 1 Antibody - Product Information

Application	WB, FC
Primary Accession	<a href="#">P49768</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
AD3; Ad3h; FAD; Protein S182; PS1-CTF12; PSEN1; PSNL1; S182;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	52668 Da

### Presenilin 1 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Presenilin 1
Description	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.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

### Presenilin 1 Antibody - Protein Information

**Name** PSEN1

**Synonyms** AD3, PS1, PSNL1

#### Function

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 (amyloid- beta precursor protein) (PubMed: [10206644](http://www.uniprot.org/citations/10206644), PubMed: [10545183](http://www.uniprot.org/citations/10545183), PubMed: [10593990](http://www.uniprot.org/citations/10593990))

target="\_blank">10593990</a>, PubMed:<a href="http://www.uniprot.org/citations/10811883" target="\_blank">10811883</a>, PubMed:<a href="http://www.uniprot.org/citations/10899933" target="\_blank">10899933</a>, PubMed:<a href="http://www.uniprot.org/citations/12679784" target="\_blank">12679784</a>, PubMed:<a href="http://www.uniprot.org/citations/12740439" target="\_blank">12740439</a>, PubMed:<a href="http://www.uniprot.org/citations/15274632" target="\_blank">15274632</a>, PubMed:<a href="http://www.uniprot.org/citations/20460383" target="\_blank">20460383</a>, PubMed:<a href="http://www.uniprot.org/citations/25043039" target="\_blank">25043039</a>, PubMed:<a href="http://www.uniprot.org/citations/26280335" target="\_blank">26280335</a>, PubMed:<a href="http://www.uniprot.org/citations/28269784" target="\_blank">28269784</a>, PubMed:<a href="http://www.uniprot.org/citations/30598546" target="\_blank">30598546</a>, PubMed:<a href="http://www.uniprot.org/citations/30630874" target="\_blank">30630874</a>). Requires the presence of the other members of the gamma-secretase complex for protease activity (PubMed:<a href="http://www.uniprot.org/citations/15274632" target="\_blank">15274632</a>, PubMed:<a href="http://www.uniprot.org/citations/25043039" target="\_blank">25043039</a>, PubMed:<a href="http://www.uniprot.org/citations/26280335" target="\_blank">26280335</a>, PubMed:<a href="http://www.uniprot.org/citations/30598546" target="\_blank">30598546</a>, PubMed:<a href="http://www.uniprot.org/citations/30630874" target="\_blank">30630874</a>). Plays a role in Notch and Wnt signaling cascades and regulation of downstream processes via its role in processing key regulatory proteins, and by regulating cytosolic CTNFB1 levels (PubMed:<a href="http://www.uniprot.org/citations/10593990" target="\_blank">10593990</a>, PubMed:<a href="http://www.uniprot.org/citations/10811883" target="\_blank">10811883</a>, PubMed:<a href="http://www.uniprot.org/citations/10899933" target="\_blank">10899933</a>, PubMed:<a href="http://www.uniprot.org/citations/9738936" target="\_blank">9738936</a>). Stimulates cell-cell adhesion via its interaction with CDH1; this stabilizes the complexes between CDH1 (E-cadherin) and its interaction partners CTNFB1 (beta-catenin), CTNND1 and JUP (gamma-catenin) (PubMed:<a href="http://www.uniprot.org/citations/11953314" target="\_blank">11953314</a>). Under conditions of apoptosis or calcium influx, cleaves CDH1 (PubMed:<a href="http://www.uniprot.org/citations/11953314" target="\_blank">11953314</a>). This promotes the disassembly of the complexes between CDH1 and CTNND1, JUP and CTNFB1, increases the pool of cytoplasmic CTNFB1, and thereby negatively regulates Wnt signaling (PubMed:<a href="http://www.uniprot.org/citations/11953314" target="\_blank">11953314</a>, PubMed:<a href="http://www.uniprot.org/citations/9738936" target="\_blank">9738936</a>). Required for normal embryonic brain and skeleton development, and for normal angiogenesis (By similarity). Mediates the proteolytic cleavage of EphB2/CTF1 into EphB2/CTF2 (PubMed:<a href="http://www.uniprot.org/citations/17428795" target="\_blank">17428795</a>, PubMed:<a href="http://www.uniprot.org/citations/28269784" target="\_blank">28269784</a>). The holoprotein functions as a calcium-leak channel that allows the passive movement of calcium from endoplasmic reticulum to cytosol and is therefore involved in calcium homeostasis (PubMed:<a href="http://www.uniprot.org/citations/16959576" target="\_blank">16959576</a>, PubMed:<a href="http://www.uniprot.org/citations/25394380" target="\_blank">25394380</a>). Involved in the regulation of neurite outgrowth (PubMed:<a href="http://www.uniprot.org/citations/15004326" target="\_blank">15004326</a>, PubMed:<a href="http://www.uniprot.org/citations/20460383" target="\_blank">20460383</a>). Is a regulator of presynaptic facilitation, spike transmission and synaptic vesicles replenishment in a process that depends on gamma-secretase activity. It acts through the control of SYT7 presynaptic expression (By similarity).

### Cellular Location

Endoplasmic reticulum. Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein. Cytoplasmic granule. Cell membrane; Multi-pass membrane protein. Cell projection, growth cone. Early endosome. Early endosome membrane; Multi-pass membrane protein. Cell projection, neuron projection. Cell projection, axon {ECO:0000250|UniProtKB:Q4JIM4}. Synapse {ECO:0000250|UniProtKB:Q4JIM4}.

Note=Translocates with bound NOTCH1 from the endoplasmic reticulum and/or Golgi to the cell surface (PubMed:10593990). Colocalizes with CDH1/2 at sites of cell-cell contact. Colocalizes with CTNFB1 in the endoplasmic reticulum and the proximity of the plasma membrane (PubMed:9738936). Also present in azurophil granules of neutrophils (PubMed:11987239).

Colocalizes with UBQLN1 in the cell membrane and in cytoplasmic juxtannuclear structures called aggresomes (PubMed:21143716).

#### Tissue Location

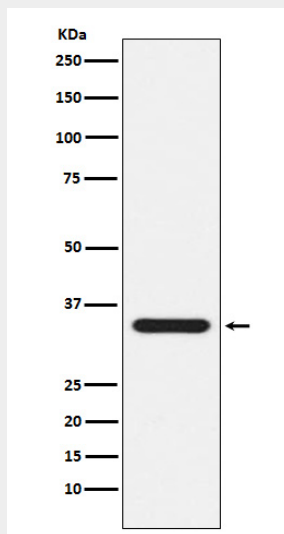
Detected in azurophile granules in neutrophils and in platelet cytoplasmic granules (at protein level) (PubMed:11987239) Expressed in a wide range of tissues including various regions of the brain, liver, spleen and lymph nodes (PubMed:7596406, PubMed:8574969, PubMed:8641442).

#### Presenilin 1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Presenilin 1 Antibody - Images



Western blot analysis of Presenilin 1 expression in Jurkat cell lysate.