

**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**

|                              |                                                                                                                                                                                                                                                                                                                     |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dilution                     | WB~~1:1000<br>FC~~1:10~50                                                                                                                                                                                                                                                                                           |
| 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:<a href="http://www.uniprot.org/citations/10206644"

target="\_blank">10206644</a>, PubMed:<a href="http://www.uniprot.org/citations/10545183" target="\_blank">10545183</a>, 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/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 CTNNB1 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 CTNNB1 (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 CTNNB1, increases the pool of cytoplasmic CTNNB1, 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

CTNNB1 in the endoplasmic reticulum and the proximity of the plasma membrane (PubMed:9738936). Also present in azurophilic granules of neutrophils (PubMed:11987239). Colocalizes with UBQLN1 in the cell membrane and in cytoplasmic juxtanuclear structures called aggresomes (PubMed:21143716).

#### **Tissue Location**

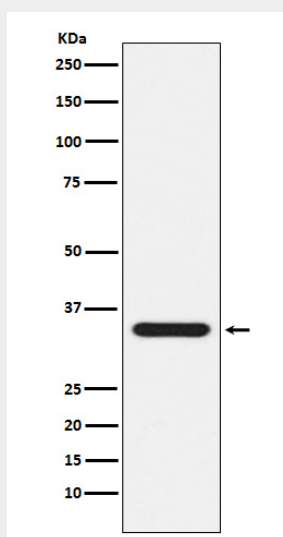
Detected in azurophilic granules in neutrophils and in platelet cytoplasmic granules (at protein level) (PubMed:11987239) Expressed in a wide range of tissues including various regions of the brain, liver, spleen and lymph nodes (PubMed:7596406, PubMed:8574969, PubMed:8641442).

#### **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.