

**Presenilin 1 Polyclonal Antibody**  
Catalog # AP72039**Specification****Presenilin 1 Polyclonal Antibody - Product Information**

Application	<b>WB</b>
Primary Accession	<a href="#">P49768</a>
Reactivity	<b>Human, Mouse, Rat</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>

**Presenilin 1 Polyclonal Antibody - Additional Information****Gene ID** 5663**Other Names**

PSEN1; AD3; PS1; PSNL1; Presenilin-1; PS-1; Protein S182

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications.

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**Presenilin 1 Polyclonal 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), PubMed: [10811883](http://www.uniprot.org/citations/10811883), PubMed: [10899933](http://www.uniprot.org/citations/10899933), PubMed: [12679784](http://www.uniprot.org/citations/12679784), PubMed: [12740439](http://www.uniprot.org/citations/12740439), PubMed: [15274632](http://www.uniprot.org/citations/15274632), PubMed: [20460383](http://www.uniprot.org/citations/20460383), PubMed: [25043039](http://www.uniprot.org/citations/25043039), PubMed: [26280335](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 azurophil granules of neutrophils (PubMed:11987239). Colocalizes with UBQLN1 in the cell membrane and in cytoplasmic juxtannuclear structures called aggresomes (PubMed:21143716).

### Tissue Location

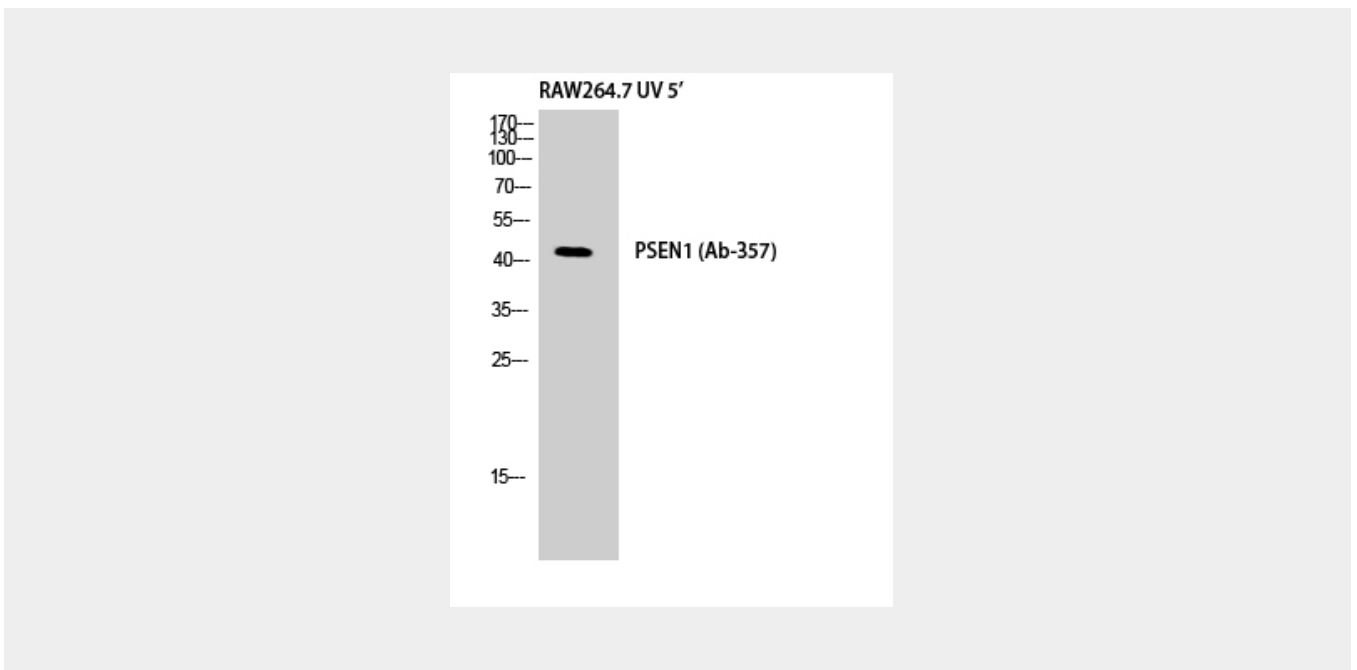
Detected in azurophile granules in neutrophils and in platelet cytoplasmic granules (at protein level) (PubMed:11987239) Expressed in a wide range of tissues including various regions of the brain, liver, spleen and lymph nodes (PubMed:7596406, PubMed:8574969, PubMed:8641442).

## Presenilin 1 Polyclonal 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 Polyclonal Antibody - Images



## Presenilin 1 Polyclonal Antibody - Background

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:15274632, PubMed:10545183, PubMed:10593990, PubMed:10206644, PubMed:10899933, PubMed:10811883, PubMed:12679784, PubMed:12740439, PubMed:25043039, PubMed:26280335, PubMed:28269784, PubMed:20460383). Requires the presence of the other members of the gamma-secretase complex for protease activity (PubMed:15274632, PubMed:25043039, PubMed:26280335). 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:9738936, PubMed:10593990, PubMed:10899933, PubMed:10811883). 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:11953314). Under conditions of apoptosis or calcium influx, cleaves CDH1 (PubMed:11953314). 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:9738936, PubMed:11953314). 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:17428795, PubMed:28269784). 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:25394380, PubMed:16959576). Involved in the regulation of neurite outgrowth (PubMed:15004326, PubMed:20460383). 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).