

# Presenilin 1 Rabbit mAb

Catalog # AP77146

## Product Information

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<b>Application</b>	WB, FC
<b>Primary Accession</b>	<a href="#">P49768</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Immunogen</b>	A synthesized peptide derived from human Presenilin 1
<b>Purification</b>	Affinity Chromatography
<b>Calculated MW</b>	52668

## Additional Information

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<b>Gene ID</b>	5663
<b>Other Names</b>	PSEN1
<b>Dilution</b>	WB~~1/500-1/1000 FC~~1:10~50
<b>Format</b>	Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	PSEN1 ( <a href="#">HGNC:9508</a> )
<b>Synonyms</b>	AD3, PS1, PSNL1
<b>Function</b>	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="#">10206644</a> , PubMed: <a href="#">10545183</a> , PubMed: <a href="#">10593990</a> , PubMed: <a href="#">10811883</a> , PubMed: <a href="#">10899933</a> , PubMed: <a href="#">12679784</a> , PubMed: <a href="#">12740439</a> , PubMed: <a href="#">15274632</a> , PubMed: <a href="#">20460383</a> , PubMed: <a href="#">25043039</a> , PubMed: <a href="#">26280335</a> , PubMed: <a href="#">28269784</a> , PubMed: <a href="#">30598546</a> , PubMed: <a href="#">30630874</a> ). Requires the presence of the other members of the gamma-secretase complex for protease activity (PubMed: <a href="#">15274632</a> , PubMed: <a href="#">25043039</a> , PubMed: <a href="#">26280335</a> , PubMed: <a href="#">30598546</a> , PubMed: <a href="#">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:[10593990](#), PubMed:[10811883](#), PubMed:[10899933](#), PubMed:[9738936](#)). 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:[11953314](#), PubMed:[9738936](#)). 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:[16959576](#), PubMed:[25394380](#)). 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).

### Cellular Location

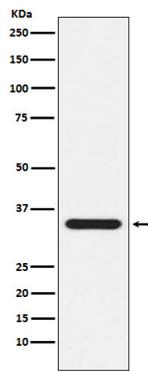
Endoplasmic reticulum. Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein. Cytoplasmic granule. Cell membrane; Multi-pass membrane protein. Cell projection, growth cone. Early endosome. Early endosome membrane; Multi-pass membrane protein. 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). Also highly enriched in mitochondria-associated endoplasmic reticulum membrane contact site (By similarity). {ECO:0000250|UniProtKB:P49769, ECO:0000269|PubMed:10593990, ECO:0000269|PubMed:11987239, ECO:0000269|PubMed:21143716, ECO:0000269|PubMed:9738936}

### 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).

### Images

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