

# Phospho-Presenilin 1 (Ser310) Rabbit mAb

Catalog # AP74958

## Product Information

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Application	WB
Primary Accession	<a href="#">P49768</a>
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	52668

## Additional Information

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Gene ID	5663
Other Names	PSEN1
Dilution	WB~~1/500-1/1000
Format	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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Name	PSEN1
Synonyms	AD3, PS1, PSNL1
Function	<p>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:<a href="#">10593990</a>, PubMed:<a href="#">10811883</a>, PubMed:<a href="#">10899933</a>, PubMed:<a href="#">9738936</a>). Stimulates cell-cell adhesion via its interaction with CDH1; this stabilizes the complexes between CDH1 (E- cadherin) and its interaction</p>

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).

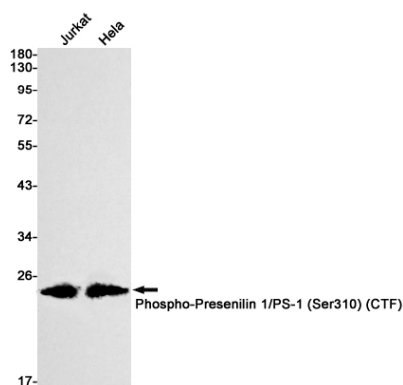
## Cellular Location

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 juxtanuclear 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).

## Images



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