

**KD-Validated Anti-Presenilin 1 Rabbit Monoclonal Antibody**  
**Rabbit monoclonal antibody**  
**Catalog # AGI1826****Specification****KD-Validated Anti-Presenilin 1 Rabbit Monoclonal Antibody - Product Information**

|                   |                                                                                                                                                                     |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application       | WB, FC                                                                                                                                                              |
| Primary Accession | <a href="#">P49768</a>                                                                                                                                              |
| Reactivity        | Rat, Human, Mouse                                                                                                                                                   |
| Clonality         | Monoclonal                                                                                                                                                          |
| Isotype           | Rabbit IgG                                                                                                                                                          |
| Calculated MW     | Predicted, 53 kDa, observed, 20 kDa kDa                                                                                                                             |
| Gene Name         | PSEN1                                                                                                                                                               |
| Aliases           | PSEN1; Presenilin 1; PSNL1; PS-1; PS1; S182; FAD; AD3; Familial Alzheimer Disease; Presenilin-1; Alzheimer Disease 3; Protein S182; EC 3.4.23.-; EC 3.4.23; ACNINV3 |
| Immunogen         | A synthesized peptide derived from human Presenilin 1                                                                                                               |

**KD-Validated Anti-Presenilin 1 Rabbit Monoclonal Antibody - Additional Information**

|                                                                                                                                                       |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Gene ID                                                                                                                                               | 5663 |
| <b>Other Names</b>                                                                                                                                    |      |
| Presenilin-1, PS-1, 3.4.23.-, Protein S182, Presenilin-1 NTF subunit, Presenilin-1 CTF subunit, Presenilin-1 CTF12, PS1-CTF12, PSEN1, AD3, PS1, PSNL1 |      |

**KD-Validated Anti-Presenilin 1 Rabbit Monoclonal 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 juxtanuclear structures called aggresomes (PubMed:21143716).

### Tissue Location

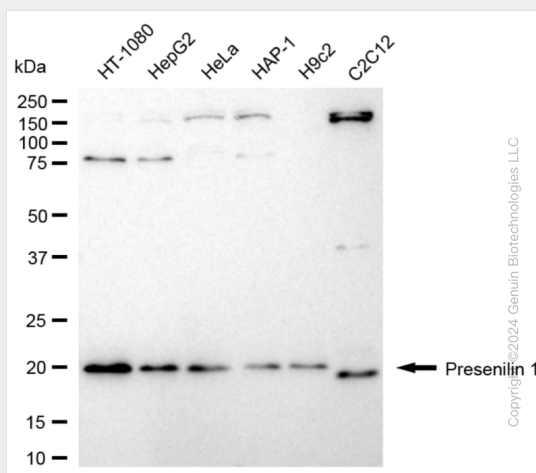
Detected in azurophile granules in neutrophils and in platelet cytoplasmic granules (at protein level) (PubMed:11987239) Expressed in a wide range of tissues including various regions of the brain, liver, spleen and lymph nodes (PubMed:7596406, PubMed:8574969, PubMed:8641442).

## KD-Validated Anti-Presenilin 1 Rabbit Monoclonal Antibody - Protocols

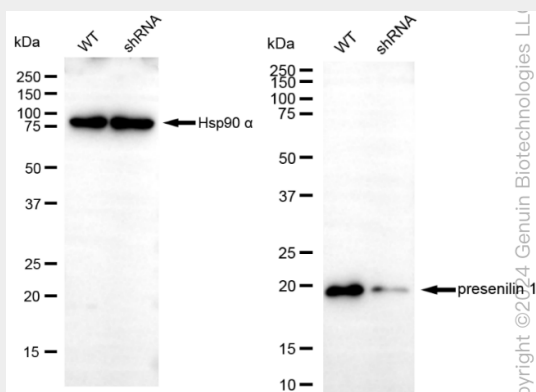
Provided below are standard protocols that you may find useful for product applications.

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

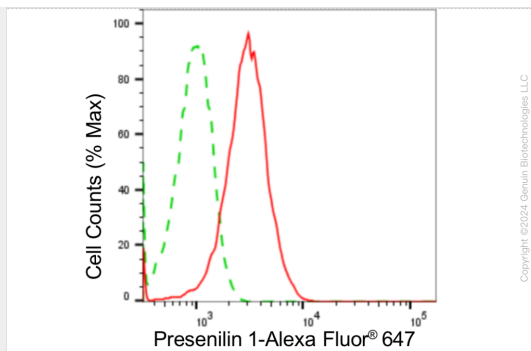
## KD-Validated Anti-Presenilin 1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-presenilin 1 antibody (Cat#AGI1826). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-presenilin 1 antibody (Cat#AGI1826, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-presenilin 1 antibody (Cat#AGI1826). Presenilin 1 expression in wild-type (WT) and presenilin 1 (PSEN1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-presenilin 1 antibody (Cat#AGI1826, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of presenilin 1 expression in HT-1080 cells using anti-presenilin 1 antibody (Cat#AGI1826, 1:2,000). Green, isotype control; red, presenilin 1.