

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	P49768
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
Other Names	
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, PubMed:28269784, PubMed:30598546, PubMed:30630874). Requires the presence of the other members of the gamma-secretase complex for protease activity (PubMed:15274632, PubMed:25043039, PubMed:26280335, PubMed:30598546, PubMed:30630874). 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 juxtanuclear structures called aggresomes (PubMed:21143716).

Tissue Location

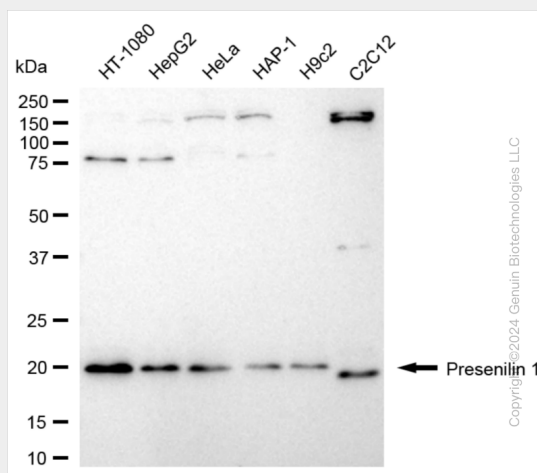
Detected in azurophile granules in neutrophils and in platelet cytoplasmic granules (at protein level) (PubMed:11987239) Expressed in a wide range of tissues including various regions of the brain, liver, spleen and lymph nodes (PubMed:7596406, PubMed:8574969, PubMed:8641442).

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

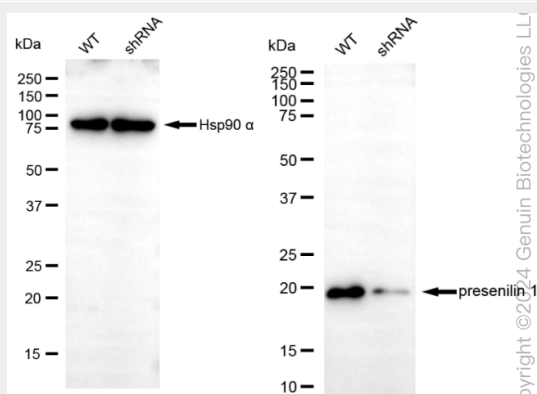
Provided below are standard protocols that you may find useful for product applications.

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

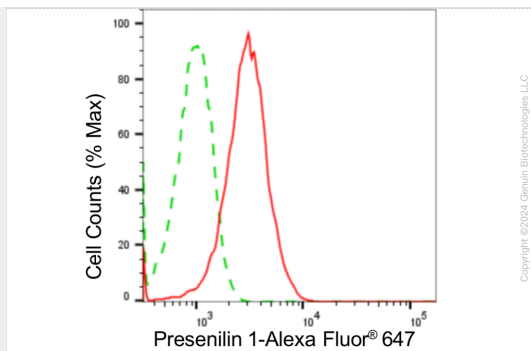
KD-Validated Anti-Presenilin 1 Rabbit Monoclonal Antibody - Images



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.