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KD-Validated Anti-Phospho-Presenilin 1 (Ser310) Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1825

Specification

KD-Validated Anti-Phospho-Presenilin 1 (Ser310) Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P49768
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 53 kDa, observed, 22 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 Phospho-Presenilin 1 (Ser310)**

KD-Validated Anti-Phospho-Presenilin 1 (Ser310) 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-Phospho-Presenilin 1 (Ser310) 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, PubMed:10545183, PubMed:10593990, PubMed:10811883, PubMed:10899933, PubMed:12679784, PubMed:12740439, PubMed:<a href="http://www.uniprot.org/citations/15274632"

target="_blank">15274632, PubMed:20460383, PubMed:25043039, PubMed: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

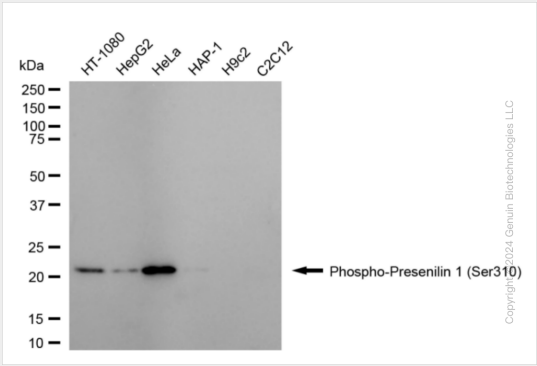
level) (PubMed:11987239) Expressed in a wide range of tissues including various regions of the brain, liver, spleen and lymph nodes (PubMed:7596406, PubMed:8574969, PubMed:8641442).

KD-Validated Anti-Phospho-Presenilin 1 (Ser310) Rabbit Monoclonal Antibody - Protocols

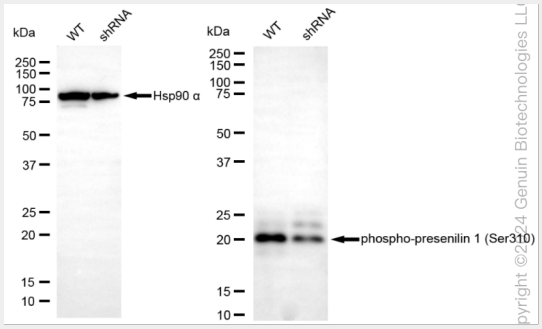
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-Phospho-Presenilin 1 (Ser310) Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-phospho-presenilin 1 (Ser310) antibody (Cat#AGI1825). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-phospho-presenilin 1 (Ser310) antibody (Cat#AGI1825, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-phospho-presenilin 1 (Ser310) antibody (Cat#AGI1825). Phospho-presenilin 1 (Ser310) expression in wild-type (WT) and 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-phospho-presenilin 1 (Ser310) antibody (Cat#AGI1825, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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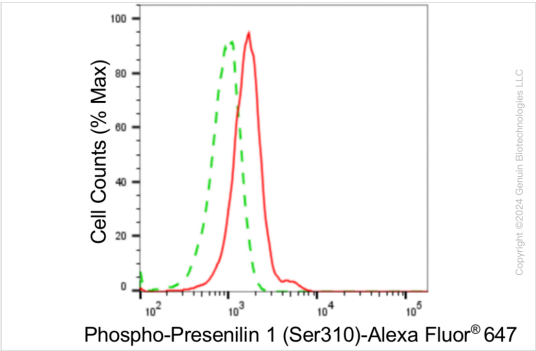
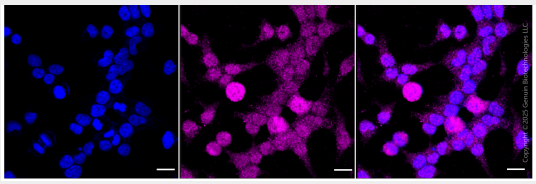


Flow cytometric analysis of Phospho-Presenilin 1 (Ser310) expression in HeLa cells using anti-Phospho-Presenilin 1 (Ser310) antibody (Cat#AGI1825, 1:2,000). Green, isotype control; red, Phospho-Presenilin 1 (Ser310).



Immunocytochemical staining of Hela cells with Phospho-Presenilin 1 (Ser310) antibody (1:1000). Nuclei were stained blue with DAPI;Phospho-Presenilin 1 (Ser310) was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium.Scale bar, 20 µm.