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# Rabbit Anti-presenilin 1 antibody

## SL0024R

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| **Product Name:** | presenilin 1 |
| **Chinese Name:** | 早老素蛋白-1抗体 |
| **Alias:** | Presenilin-1 NTF subunit; AD 3; AD3; Ad3h; Alzheimer Disease 3; EC 3.4.23.; FAD; Homo Sapiens Clone CC44 Senilin 1; Presenilin 1 Alzheimer disease 3; Presenilin 1; Presenilin1; Protein S182; PS 1; PS-1; PS1; PSEN 1; PSEN1; PSN 1; PSN1; PSN1_HUMAN; PSNL 1; PSNL1; S182; S182 Protein; Senilin 1; Senilin1. |
| **Organism Species:** | Rabbit |
| **Clonality:** | Polyclonal |
| **React Species:** | Human,Mouse,Rat,Dog,Pig,Cow,Rabbit, |
| **Applications:** | WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1ug/testIF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user. |
| **Molecular weight:** | 34/52kDa |
| **Cellular localization:** | cytoplasmicThe cell membrane |
| **Form:** | Lyophilized or Liquid |
| **Concentration:** | 1mg/ml |
| **immunogen:** | KLH conjugated synthetic peptide derived from human Presenilin-1 NTF subunit:10-80/467 |
| **Lsotype:** | IgG |
| **Purification:** | affinity purified by Protein A |
| **Storage Buffer:** | 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol. |
| **Storage:** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |
| **PubMed:** | PubMed |
| **Product Detail:** | Alzheimer's disease (AD) patients with an inherited form of the disease carry mutations in the presenilin proteins (PSEN1; PSEN2) or in the amyloid precursor protein (APP). These disease-linked mutations result in increased production of the longer form of |

amyloid-beta (main component of amyloid deposits found in AD brains). Presenilins are postulated to regulate APP processing through their effects on gamma-secretase, an enzyme that cleaves APP. Also, it is thought that the presenilins are involved in the cleavage of the Notch receptor, such that they either directly regulate gamma-secretase activity or themselves are protease enzymes. Several alternatively spliced transcript variants encoding different isoforms have been identified for this gene, the full-length nature of only some have been determined. [provided by RefSeq, Aug 2008]

**Function:**
Probable 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 (beta-amyloid precursor protein). Requires the other members of the gamma-secretase complex to have a protease activity. May play a role in intracellular signaling and gene expression or in linking chromatin to the nuclear membrane. Stimulates cell-cell adhesion though its association with the E-cadherin/catenin complex. Under conditions of apoptosis or calcium influx, cleaves E-cadherin promoting the disassembly of the E-cadherin/catenin complex and increasing the pool of cytoplasmic beta-catenin, thus negatively regulating Wnt signaling. May also play a role in hematopoiesis.

**Subunit:**
Homodimer. Component of the gamma-secretase complex, a complex composed of a presenilin homodimer (PSEN1 or PSEN2), nicastrin (NCSTN), APH1 (APH1A or APH1B) and PEN2. Such minimal complex is sufficient for secretase activity. Other components which are associated with the complex include SLC25A64, SLC5A7, PHB and PSEN1 isoform 3. Predominantly heterodimer of a N-terminal (NTF) and a C-terminal (CTF) endoproteolytical fragment. Associates with proteolytic processed C-terminal fragments C83 and C99 of the amyloid precursor protein (APP). Associates with NOTCH1. Associates with cadherin/catenin adhesion complexes through direct binding to CDH1 or CDH2. Interaction with CDH1 stabilizes the complex and stimulates cell-cell aggregation. Interaction with CDH2 is essential for trafficking of CDH2 from the endoplasmic reticulum to the plasma membrane. Interacts with CTNND2, CTNNB1, HERPUD1, FLNA, FLNB, MTCH1, PKP4 and PARL. Interacts through its N-terminus with isoform 3 of GFAP. Interacts with DOCK3.

**Subcellular Location:**
Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein. Cell surface. Note=Bound to NOTCH1 also at the cell surface. Colocalizes with CDH1/2 at sites of cell-cell contact. Colocalizes with CTNNB1 in the endoplasmic reticulum and the proximity of the plasma membrane. Also present in azurophil granules of neutrophils.

**Tissue Specificity:**
Expressed in a wide range of tissues including various regions of the brain, liver, spleen and lymph nodes.

**Post-translational modifications:**
Heterogeneous proteolytic processing generates N-terminal (NTF) and C-terminal (CTF) fragments of approximately 35 and 20 kDa, respectively. During apoptosis, the C-terminal fragment (CTF) is further cleaved by caspase-3 to produce the fragment, PS1-CTF12.
After endoproteolysis, the C-terminal fragment (CTF) is phosphorylated on serine residues by PKA and/or PKC. Phosphorylation on Ser-346 inhibits endoproteolysis.

**DISEASE:**
Defects in PSEN1 are a cause of Alzheimer disease type 3 (AD3) [MIM:607822]. AD3 is a familial early-onset form of Alzheimer disease. Alzheimer disease is a neurodegenerative disorder characterized by progressive dementia, loss of cognitive abilities, and deposition of fibrillar amyloid proteins as intraneuronal neurofibrillary tangles, extracellular amyloid plaques and vascular amyloid deposits. The major constituent of these plaques is the neurotoxic amyloid-beta-APP 40-42 peptide (s), derived proteolytically from the transmembrane precursor protein APP by sequential secretase processing. The cytotoxic C-terminal fragments (CTFs) and the caspase-cleaved products such as C31 derived from APP, are also implicated in neuronal death. Defects in PSEN1 are a cause of frontotemporal dementia (FTD) [MIM:600274].

**Similarity:**
Belongs to the peptidase A22A family.

**SWISS:**
P49768

**Gene ID:**
5663

**Database links:**

Entrez Gene: 5663 Human

Entrez Gene: 19164 Mouse

Entrez Gene: 29192 Rat

Omim: 104311 Human

SwissProt: P49768 Human

SwissProt: P49769 Mouse

SwissProt: P97887 Rat

Unigene: 3260 Human

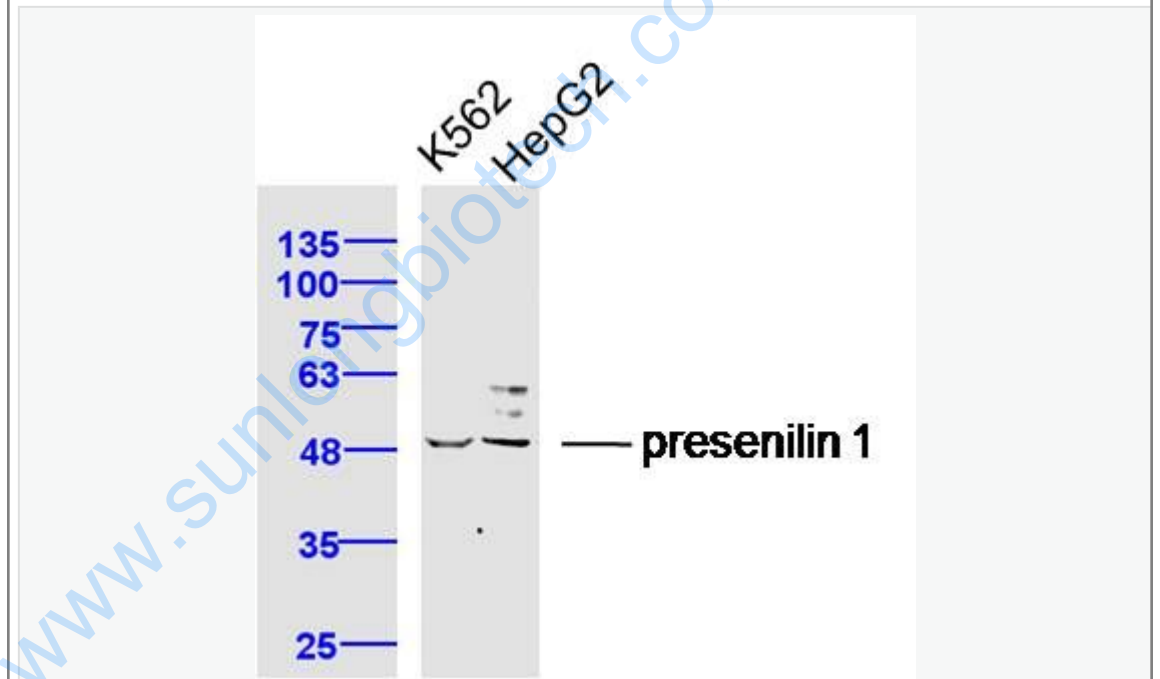| | |
|---|---|
| | [Unigene: 998](Unigene) Mouse<br><br>[Unigene: 44440](Unigene) Rat<br><br><br>**Important Note:**<br>This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.<br><br>此抗体识别分子量为45-50kDa早老素蛋白-1。PS-1主要在神经细胞中表达，早老蛋白集中于体细胞和树突状细胞中。相反，再早发家族AD（FAD）中和散发AD病人中，PS1免疫反应出现在老年斑和神经纤维缠结的神经炎中。 |
| **Picture:** | <br><br>Sample:<br><br>K562 Cell (Human) Lysate at 40 ug<br><br>HepG2 Cell (Human) Lysate at 40 ug<br><br>Primary: Anti-presenilin 1 (SL0024R) at 1/300 dilution<br><br>Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution<br><br>Predicted band size: 34/52 kD |

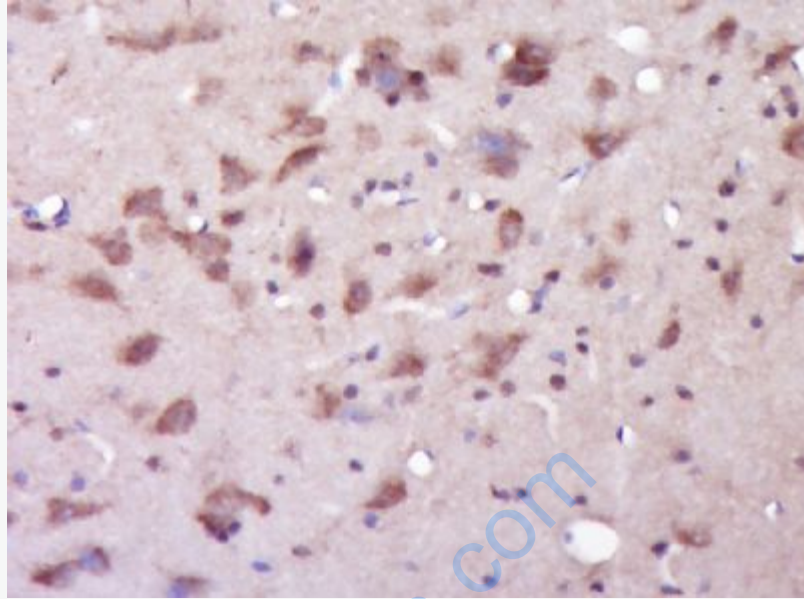Observed band size: 50 kD
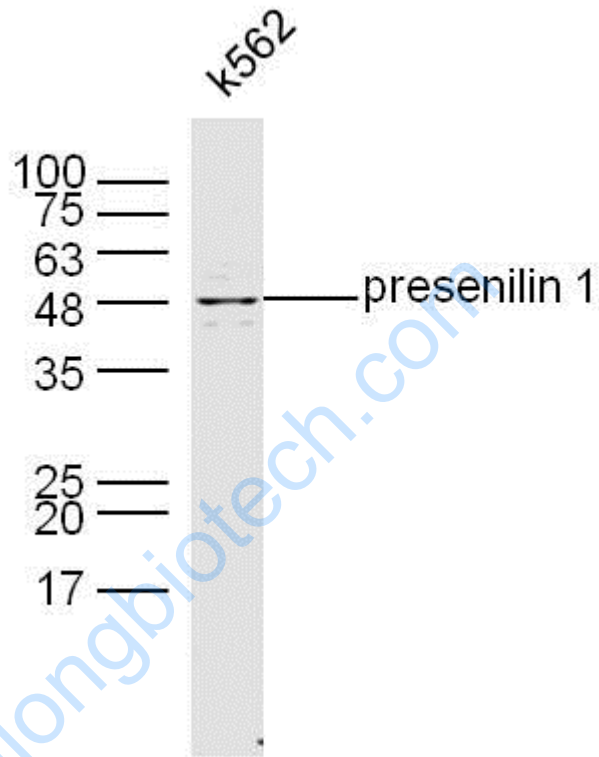


Sample: K562 Cell Lysate at 40 ug

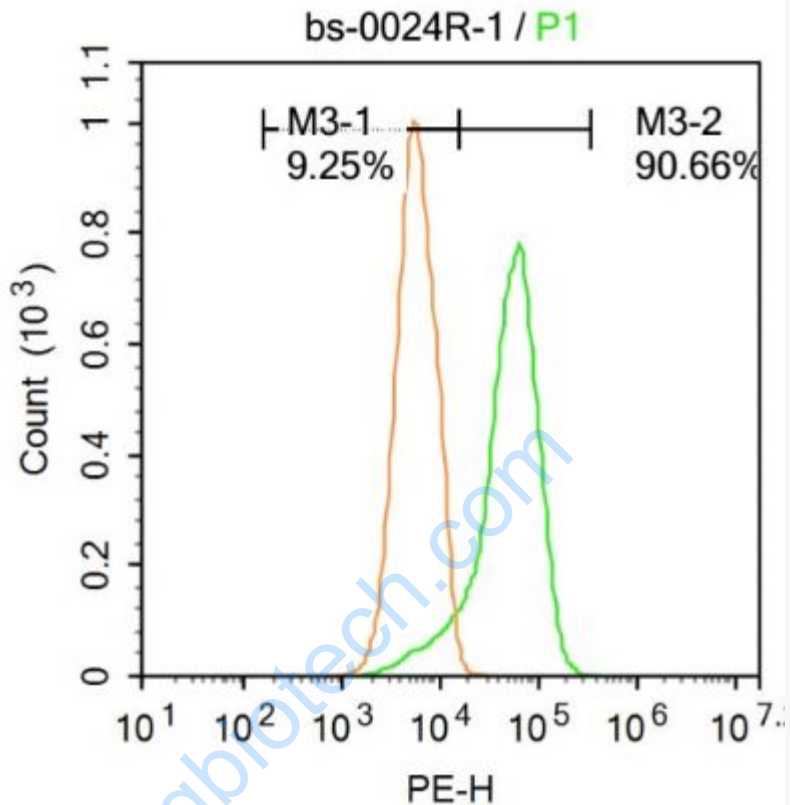Primary: Anti- presenilin1 (SL0024R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 34/52 kD

Observed band size: 48 kD

Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (presenilin 1) Polyclonal Antibody, Unconjugated (SL0024R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

Blank control: Raji.

Primary Antibody (green line): Rabbit Anti-presenilin 1 antibody (SL0024R)

Dilution: 1μg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-PE

Dilution: 1μg /test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then

permeabilized with PBST for 20 min at room temperature. The cells were then

incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at

at room temperature .Cells stained with Primary Antibody for 30 min at room

| | temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed. |
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