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Mouse Anti-presenilin 1/AF350 Conjugated antibody

SL0024M-AF350

Product Name	Anti-presenilin 1/AF350
Chinese Name	AF350 标记的早老素蛋白-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; Presenilin-1 CTF12; Presenilin1; Protein S182; PS 1; PS-1; PS1; PS1-CTF12; PSEN 1; PSEN1; PSN 1; PSN1; PSN1_HUMAN; PSNL 1; PSNL1; S182; S182 Protein; Senilin 1; Senilin1.
Research Area	Cell biology immunology Neurobiology
Immunogen Species	Mouse
Clonality	Polyclonal
React Species	Mouse(predicted:Human,Rat,Chicken,Dog,Pig,Cow,Horse,Rabbit)
Applications	IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	34/52kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human presenilin 1
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% 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 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Product Detail	**background:** 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:
After endoproteolysis, the C-terminal fragment (CTF) is phosphorylated on serine residues by PKA and/or PKC. Phosphorylation on Ser-346 inhibits endoproteolysis.

DISEASE:
Alzheimer disease 3 (AD3) [MIM:607822]: 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. Note=The disease is caused by mutations affecting the gene represented in this entry.
Frontotemporal dementia (FTD) [MIM:600274]: A form of dementia characterized by pathologic finding of frontotemporal lobar degeneration, presenile dementia with behavioral changes, deterioration of cognitive capacities and loss of memory. In some cases, parkinsonian symptoms are prominent. Neuropathological changes include frontotemporal atrophy often associated with atrophy of the basal ganglia, substantia nigra, amygdala. In most cases, protein tau deposits are found in glial cells and/or neurons. Note=The disease is caused by mutations affecting the gene represented in this entry.
Cardiomyopathy, dilated 1U (CMD1U) [MIM:613694]: A disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death. Note=The disease is caused by mutations affecting the gene represented in this entry.
Familial acne inversa 3 (ACNINV3) [MIM:613737]: A chronic relapsing inflammatory disease of the hair follicles characterized by recurrent draining sinuses, painful skin abscesses, and disfiguring scars. Manifestations typically appear after puberty. Note=The disease is caused by mutations affecting the

gene represented in this entry.

Similarity:
Belongs to the peptidase A22A family.

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 Mouse

Unigene: 44440 Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

此抗体识别分子量为 45-50 kDa 早老素蛋白-1。PS-1 主要在神经细胞中表达，该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，树突状细胞中表达。