Presenilin 1 (Phospho Ser357) Rabbit pAb

CatalogNo: YP0831 Orthogonal Validated

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB,IHC,IF,ELISA

MW
- 43kD (Observed)

Isotype
- IgG

Storage

Storage*	-15°C to -25°C/1 year (Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-1:2000
IHC 1:100-1:300
ELISA 1:5000
IF 1:50-200

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human PSEN1 around the phosphorylation site of Ser357. AA range:323-372

Specificity	Phospho-Presenilin 1 (S357) Polyclonal Antibody detects endogenous levels of Presenilin 1 protein only when phosphorylated at S357.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):PEsRA

Target Information

Gene name PSEN1

Protein Name Presenilin-1

Organism	Gene ID	UniProt ID
Human	5663;	P49768;
Mouse	19164;	P49769;
Rat	29192;	P97887;

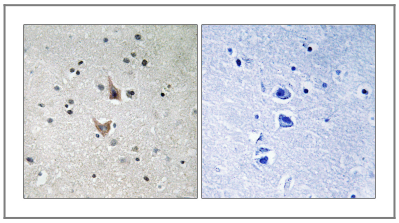
Cellular Localization Endoplasmic reticulum . Endoplasmic reticulum membrane ; Multi-pass membrane protein . Golgi apparatus membrane ; Multi-pass membrane protein . Cytoplasmic granule . Cell membrane ; Multi-pass membrane protein . Cell projection , growth cone . Early endosome . Early endosome membrane ; Multi-pass membrane protein . Cell projection , neuron projection . Cell projection , axon . Cell junction , synapse . 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 specificity 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:8641442 , PubMed:8574969) .

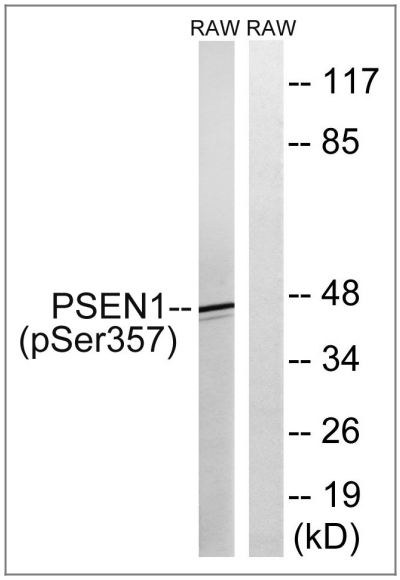
Function

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 cognitve 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. ,Disease:Defects in PSEN1 are a cause of frontotemporal dementia [MIM:600274]. ,Domain:The PAL motif is required for normal active site conformation. ,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. ,online information:Presenilins mutations ,PTM:After endoproteolysis , the C-terminal fragment (CTF) is phosphorylated on serine residues by PKA and/or PKC. Phosphorylation on Ser-346 inhibits endoproteolysis. ,PTM: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. ,similarity:Belongs to the peptidase A22A family. ,subcellular location: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. ,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. Component of 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. ,tissue specificity:Expressed in a wide range of tissues including various regions of the brain , liver , spleen and lymph nodes. ,

Validation Data



Immunohistochemistry analysis of paraffin-embedded human brain, using PSEN1 (Phospho-Ser357) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from RAW264.7 cells treated with UV 5', using PSEN1 (Phospho-Ser357) Antibody. The lane on the right is blocked with the phospho peptide.

Contact information

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Please scan the QR code to access additional product information:
Presenilin 1 (Phospho Ser357) Rabbit pAb

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