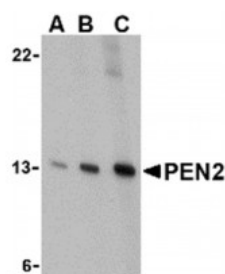


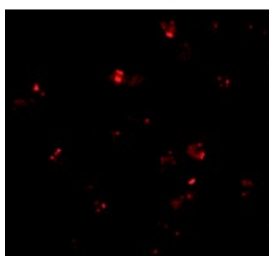


## PEN2 Antibody

CATALOG NUMBER: 3979



Western blot analysis of PEN2 in K562 cell lysate with PEN2 antibody at (A) 0.5, (B) 1, and (C) 2 ug/mL.



Immunofluorescence of PEN2 in K562 cells with PEN2 antibody at 20 ug/mL.

### Specifications

<b>SPECIES REACTIVITY:</b>	Human, Mouse, Rat
<b>HOMOLOGY:</b>	Predicted species reactivity based on immunogen sequence: Bovine: (100%)
<b>TESTED APPLICATIONS:</b>	ELISA, IF, WB
<b>APPLICATIONS:</b>	PEN2 antibody can be used for detection of PEN2 by Western blot at 0.5 - 2 ug/mL. Antibody can also be used for immunohistochemistry starting at 20 ug/mL.
<b>USER NOTE:</b>	Optimal dilutions for each application to be determined by the researcher.
<b>POSITIVE CONTROL:</b>	1) Cat. No. 1204 - K562 Cell Lysate
<b>IMMUNOGEN:</b>	PEN2 antibody was raised against a 13 amino acid synthetic peptide from near the carboxy terminus of human PEN2.  The immunogen is located within the last 50 amino acids of PEN2.
<b>HOST SPECIES:</b>	Rabbit

### Properties

<b>PURIFICATION:</b>	PEN2 Antibody is affinity chromatography purified via peptide column.
<b>PHYSICAL STATE:</b>	Liquid
<b>BUFFER:</b>	PEN2 Antibody is supplied in PBS containing 0.02% sodium azide.
<b>CONCENTRATION:</b>	1 mg/mL
<b>STORAGE CONDITIONS:</b>	PEN2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
<b>CLONALITY:</b>	Polyclonal
<b>ISOTYPE:</b>	IgG
<b>CONJUGATE:</b>	Unconjugated

### Additional Info

<b>ALTERNATE NAMES:</b>	PEN2 Antibody: PEN2, PEN-2, MDS033, MSTP064, PEN2, Gamma-secretase subunit PEN-2, Presenilin
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	enhancer protein 2
<b>ACCESSION NO.:</b>	NP_758844
<b>PROTEIN GI NO.:</b>	28144920
<b>OFFICIAL SYMBOL:</b>	PSENEN
<b>GENE ID:</b>	55851

## Background

**BACKGROUND:** PEN2 Antibody: PEN2, in addition to presenilin, nicastrin, and APH-1 forms the gamma-secretase protein complex, a membrane-bound aspartyl protease that can cleave certain proteins at peptide bonds buried within the hydrophobic environment of the lipid bilayer. This cleavage is responsible for a key step in signaling from several cell-surface receptors and is thought to be required for the generation of the neurotoxic amyloid peptides that are central to the pathogenesis of Alzheimer's disease. Like the tumor necrosis factor-alpha-converting enzyme (TACE) and the beta-site cleavage enzyme (BACE) protease families, gamma-secretase will cleave the amyloid precursor protein (APP), but within the intramembrane region of APP, resulting in either the non-toxic p3 (from the alpha and gamma cleavage site) or the toxic Abeta amyloid peptide (from the beta and gamma cleavage site). It is thought that accumulation of the Abeta peptide is the precursor to Alzheimer's disease.

- REFERENCES:**
- 1) Weihofen A and Martoglio B. Intramembrane-cleaving proteases: controlled liberation of proteins and bioactive peptides. Trends Cell Biol. 2003; 13:71-8.
  - 2) Periz G and Fortini ME. Functional reconstitution of g-secretase through coordinated expression of presenilin, nicastrin, aph-1, and pen-2. J. Neurosci. Res. 2004; 77:309-22.
  - 3) Selkoe DJ. The cell biology of b-amyloid precursor protein and presenilin in Alzheimer's disease. Trends Cell Biol. 1998; 8:447-53.
  - 4) Selkoe SJ. Translating cell biology into therapeutic advances in Alzheimer's disease. Nature 1999; 399:A23-31

**FOR RESEARCH USE ONLY**

December 12, 2016