10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Presenilin 2/1 (PSEN2/PSEN1) Antibody (N-term) Blocking peptide

Synthetic peptide
Catalog # BP6304c

Specification

Presenilin 2/1 (PSEN2/PSEN1) Antibody (N-term) Blocking peptide - Product Information

Primary Accession	P49810
Other Accession	PSN2_HUMAN

Presenilin 2/1 (PSEN2/PSEN1) Antibody (N-term) Blocking peptide - Additional Information

Gene ID 5664

Other Names
Presenilin-2, PS-2, 3423-, AD3LP, AD5, E5-1, STM-2, Presenilin-2 NTF subunit, Presenilin-2 CTF subunit, PSEN2, AD4, PS2, PSNL2, STM2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP6304c was selected from the C-term region of human PSN2/1 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Presenilin 2/1 (PSEN2/PSEN1) Antibody (N-term) Blocking peptide - Protein Information

Name PSEN2

Synonyms AD4, PS2, PSNL2, STM2

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 (amyloid- beta 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. May function in the cytoplasmic partitioning of proteins. The holoprotein functions as a calcium-leak channel that allows the passive movement of calcium from endoplasmic reticulum to cytosol and is involved in calcium homeostasis (PubMed:<a

href="http://www.uniprot.org/citations/16959576" target="_blank">16959576). Is a regulator of mitochondrion-endoplasmic reticulum membrane tethering and modulates calcium ions shuttling between ER and mitochondria (PubMed:21285369).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein

Tissue Location
Isoform 1 is seen in the placenta, skeletal muscle and heart while isoform 2 is seen in the heart, brain, placenta, liver, skeletal muscle and kidney.

Presenilin 2/1 (PSEN2/PSEN1) Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

Presenilin 2/1 (PSEN2/PSEN1) Antibody (N-term) Blocking peptide - Images

Presenilin 2/1 (PSEN2/PSEN1) Antibody (N-term) Blocking peptide - Background

PSEN2 is the 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). The gamma-secretase complex is composed of a presenilin homodimer (PSEN1 or PSEN2), nicastrin (NCSTN), APH1 (APH1A or APH1B) and PEN2. Such minimal complex is sufficient for secretase activity, although other components may exist. PSEN2 requires the other members of the gamma-secretase complex to have a protease activity. This protein may play a role in intracellular signaling and gene expression or in linking chromatin to the nuclear membrane, and may also function in the cytoplasmic partitioning of proteins. PSEN2 has been shown to interact with HERPUD1, FLNA and FLNB. The protein appears to localize to the Golgi and endoplasmic reticulum. Isoform 1 is seen in the placenta, skeletal muscle and heart while isoform 2 is seen in the heart, brain, placenta, liver, skeletal muscle and kidney. Defects in PSEN2 are the cause of an inherited form of Alzheimer disease (AD), an autosomal dominant neurodegenerative disorder characterized by progressive dementia, parkinsonism, and deposition of fibrillar amyloid proteins as intraneuronal neurofibrillary tangles, extracellular amyloid plaques and vascular amyloid deposits. Three causative genes have been identified that when mutated lead to presenile Alzheimer's disease: APP (amyloid precursor protein gene), PSEN1 and PSEN2. These three genes account for half of the families with autosomal dominant presenile AD, which represent approximately 10% of the whole AD population.

Presenilin 2/1 (PSEN2/PSEN1) Antibody (N-term) Blocking peptide - References

Sai, X., et al., J. Biol. Chem. 277(15):12915-12920 (2002).Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).Finckh, U., et al., Am. J. Hum. Genet. 66(1):110-117 (2000).Kimberly, W.T., et al., J. Biol. Chem. 275(5):3173-3178 (2000).Steiner, H., et al., J. Biol. Chem. 274(40):28669-28673 (1999).