

# Presenilin 1 (N-19): sc-1245

## BACKGROUND

A novel protein, designated Presenilin 1 (also designated S182) and mapping to the AD3 locus of chromosome 14q24.2, has been described. Mutations in PSEN1, the gene encoding Presenilin 1, have been found in families suffering from early-onset Alzheimer's disease. A highly related protein, designated Presenilin 2 (also designated STM2), shares 80% amino acid sequence identity with Presenilin 1. Presenilin 1 and 2 have similar structures and represent novel members of the seven-pass transmembrane receptor superfamily. Point mutations in the gene encoding Presenilin 2 have been found in Volga German families who suffer from an inherited form of early-onset Alzheimer's disease. Whether these proteins function as ligand-gated ion channels or G protein-coupled receptors has yet to be resolved. ALG-3, the mouse homolog of human Presenilin 2, has been cloned from the mouse liver cDNA library.

## CHROMOSOMAL LOCATION

Genetic locus: PSEN1 (human) mapping to 14q24.2; Psen1 (mouse) mapping to 12 D1.

## SOURCE

Presenilin 1 (N-19) is available as either goat (sc-1245) or rabbit (sc-1245-R) affinity purified polyclonal antibody raised against a peptide mapping N-terminus of Presenilin 1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1245 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Presenilin 1 (N-19) is recommended for detection of Presenilin 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Presenilin 1 (N-19) is also recommended for detection of Presenilin 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Presenilin 1 siRNA (h): sc-36312, Presenilin 1 siRNA (m): sc-36313, Presenilin 1 shRNA Plasmid (h): sc-36312-SH, Presenilin 1 shRNA Plasmid (m): sc-36313-SH, Presenilin 1 shRNA (h) Lentiviral Particles: sc-36312-V and Presenilin 1 shRNA (m) Lentiviral Particles: sc-36313-V.

Molecular Weight of Presenilin 1 holoprotein: 47 kDa.

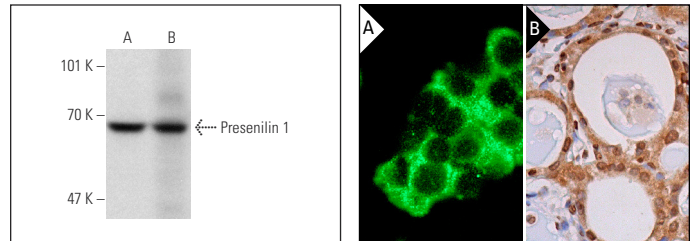
Molecular Weight of Presenilin 1 aggregated: 50-250 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or rat brain extract: sc-2392.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



Presenilin 1 (N-19)-R: sc-1245-R. Western blot analysis of Presenilin 1 expression in HeLa (A) and Hep G2 (B) whole cell lysates.

Presenilin 1 (N-19): sc-1245. Immunofluorescence staining of methanol-fixed PC-12 cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic and nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Janicki, S., et al. 1999. Presenilin overexpression arrests cells in the G<sub>1</sub> phase of the cell cycle. *Am. J. Pathol.* 155: 135-144.
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- Brodeur, I., et al. 2004. Regulation of the Fanconi anemia group C protein through proteolytic modification. *J. Biol. Chem.* 279: 4713-4720.
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- Zhou, S., et al. 2005. CD147 is a regulatory subunit of the  $\gamma$ -secretase complex in Alzheimer's disease amyloid  $\beta$ -peptide production. *Proc. Natl. Acad. Sci. USA* 102: 7499-7504.
- Oh, Y.S., et al. 2006. Effect of  $\gamma$ -secretase inhibitors on muscarinic receptor-mediated calcium signaling in human salivary epithelial cells. *Am. J. Physiol., Cell Physiol.* 291: C76-C82.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.


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Try **Presenilin 1 (H-5): sc-365495** or **Presenilin 1 (D-10): sc-365450**, our highly recommended monoclonal alternatives to Presenilin 1 (N-19).