

# Presenilin 2 (N-20): sc-1457

## 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 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 Presenilin 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: PSEN2 (human) mapping to 1q42.13; Psen2 (mouse) mapping to 1 H4.

## SOURCE

Presenilin 2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Presenilin 2 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-1457 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Presenilin 2 (N-20) is recommended for detection of Presenilin 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Presenilin 2 (N-20) is also recommended for detection of Presenilin 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Presenilin 2 siRNA (h): sc-36314, Presenilin 2 siRNA (m): sc-36315, Presenilin 2 shRNA Plasmid (h): sc-36314-SH, Presenilin 2 shRNA Plasmid (m): sc-36315-SH, Presenilin 2 shRNA (h) Lentiviral Particles: sc-36314-V and Presenilin 2 shRNA (m) Lentiviral Particles: sc-36315-V.

Molecular Weight of Presenilin 2 holoprotein: 50 kDa.

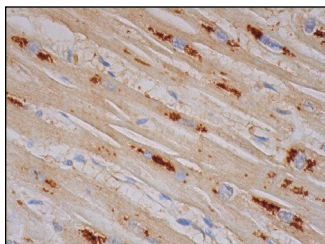
Molecular Weight of aggregated Presenilin 2: 50-250 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, HeLa whole cell lysate: sc-2200 or rat brain extract: sc-2392.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



Presenilin 2 (N-20): sc-1457. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

## SELECT PRODUCT CITATIONS

1. Hebert, S.S., et al. 2003. Dimerization of presenilin-1 *in vivo*: suggestion of novel regulatory mechanisms leading to higher order complexes. *Biochem. Biophys. Res. Commun.* 301: 119-126.
2. Kimura, N., et al. 2004. Presenilin-2 in the cynomolgus monkey brain: investigation of age-related changes. *Primates* 45: 167-175.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Presenilin 2 (B-7): sc-393758**, our highly recommended monoclonal alternative to Presenilin 2 (N-20).