

Presenilin 2 (H-76): sc-7861

BACKGROUND

A novel protein, designated Presenilin 1 (also designated S182) and mapping to the AD3 locus of chromosome 14q24.3, 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.

REFERENCES

1. Bird, T.D., et al. 1988. Familial Alzheimer's disease in American descendants of the Volga Germans: probable genetic founder effect. *Ann. Neurol.* 23: 25-31.
2. Sherrington, R., et al. 1995. Cloning of a gene bearing missense mutations in early-onset familial Alzheimer's disease. *Nature* 375: 754-760.

CHROMOSOMAL LOCATION

Genetic locus: PSEN2 (human) mapping to 1q42.13; Psen2 (mouse) mapping to 1 H4.

SOURCE

Presenilin 2 (H-76) is a rabbit polyclonal antibody raised against amino acids 1-76 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.

APPLICATIONS

Presenilin 2 (H-76) 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), 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

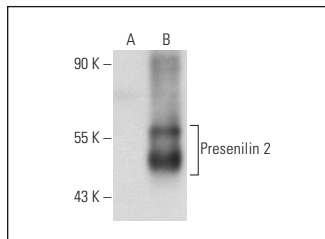
Molecular Weight of Presenilin 2 aggregated: 50-250 kDa.

Positive Controls: Presenilin 2 (h2): 293T Lysate: sc-172789, 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 goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Presenilin 2 (H-76): sc-7861. Western blot analysis of Presenilin 2 expression in non-transfected: sc-117752 (A) and human Presenilin 2 transfected: sc-172789 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Figueroa, D.J., et al. 2001. Aβpp secretases are co-expressed with Aβpp in the pancreatic islets. *J. Alzheimers Dis.* 3: 393-396.
2. Song, D., et al. 2009. Human ISCA1 interacts with IOP1/NARFL and functions in both cytosolic and mitochondrial iron-sulfur protein biogenesis. *J. Biol. Chem.* 284: 35297-35307.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at 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 (H-76).