

Presenilin 1 (C-20): sc-1244

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.

CHROMOSOMAL LOCATION

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

SOURCE

Presenilin 1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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-1244 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Presenilin 1 (C-20) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Presenilin 1 (C-20) is also recommended for detection of Presenilin 1 in additional species, including equine, canine, bovine, porcine and avian. 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 aggregated Presenilin 1: 50-250 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

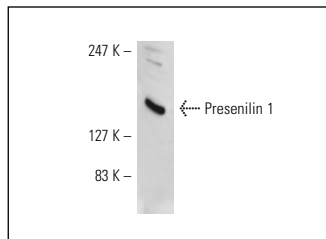
RESEARCH USE

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

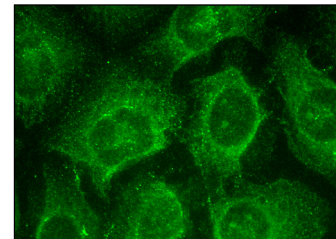
STORAGE

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

DATA



Presenilin 1 (C-20): sc-1244. Western blot analysis of Presenilin 1 final aggregate expression in PC-12 whole cell lysate.



Presenilin 1 (C-20): sc-1244. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

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. Figueroa, D.J., et al. 2002. Presenilin-dependent γ-secretase activity modulates neurite outgrowth. *Neurobiol. Dis.* 9: 49-60.
3. Weijzen, S., et al. 2003. HPV16 E6 and E7 oncoproteins regulate Notch 1 expression and cooperate to induce transformation. *J. Cell. Physiol.* 194: 356-362.
4. Kim, H., et al. 2005. Presenilin 1 D257A and D385A mutants fail to cleave Notch in their endoproteolyzed forms, but only presenilin 1 D385A mutant can restore its γ-secretase activity with the compensatory overexpression of normal C-terminal fragment. *J. Biol. Chem.* 280: 22462-22472.
5. Berezovska, O., et al. 2005. Familial Alzheimer's disease presenilin 1 mutations cause alterations in the conformation of presenilin and interactions with amyloid precursor protein. *J. Neurosci.* 25: 3009-3017.
6. Panegyres, P.K., et al. 2005. Presenilin immunoreactivity in Alzheimer's disease. *Eur. J. Neurol.* 12: 700-706.
7. Nizzari, M., et al. 2007. Amyloid precursor protein and Presenilin 1 interact with the adaptor GRB2 and modulate ERK 1,2 signaling. *J. Biol. Chem.* 282: 13833-13844.
8. Kedem, A., et al. 2011. Growth differentiating factor 9 (GDF9) and bone morphogenetic protein 15 both activate development of human primordial follicles *in vitro*, with seemingly more beneficial effects of GDF9. *J. Clin. Endocrinol. Metab.* 96: E1246-E1254.

MONOS
Satisfaction
Guaranteed

Try **Presenilin 1 (H-5): sc-365495** or **Presenilin 1 (D-10): sc-365450**, our highly recommended monoclonal alternatives to Presenilin 1 (C-20).