

PEN-2 (FL-101): sc-32946

BACKGROUND

Four proteins comprise the γ -secretase complex: presenilin, nicastrin, Aph-1, and PEN-2. Together, these proteins mediate cell surface signaling pathways for a variety of type I membrane proteins, notably amyloid- β precursor protein, a protein implicated in the development of Alzheimer's disease, via intramembrane proteolysis. The proteins assemble into a proteolytically active complex in the Golgi/*trans*-Golgi network (TGN) compartments. Assembly leads to autocleavage of presenilin into two subunits to create the active site of γ -secretase, an important step in understanding the mechanisms involved in the etiology and possible treatment of Alzheimer's disease.

REFERENCES

1. Kimberly, W.T., et al. 2003. Identity and function of γ -secretase. *J. Neurosci. Res.* 74: 353-360.
2. Baulac, S., et al. 2003. Functional γ -secretase complex assembly in Golgi/*trans*-Golgi network: interactions among presenilin, nicastrin, Aph1, Pen-2, and γ -secretase substrates. *Neurobiol. Dis.* 14: 194-204.
3. Wolfe, M.S. 2003. γ -secretase—intramembrane protease with a complex. *Sci. Aging Knowledge Environ.* 2003: PE7.

CHROMOSOMAL LOCATION

Genetic locus: PSENEN (human) mapping to 19q13.12; Psenen (mouse) mapping to 7 B1.

SOURCE

PEN-2 (FL-101) is a rabbit polyclonal antibody raised against amino acids 1-101 representing full length PEN-2 of human origin.

PRODUCT

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

APPLICATIONS

PEN-2 (FL-101) is recommended for detection of PEN-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

PEN-2 (FL-101) is also recommended for detection of PEN-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PEN-2 siRNA (h): sc-45986, PEN-2 siRNA (m): sc-45987, PEN-2 shRNA Plasmid (h): sc-45986-SH, PEN-2 shRNA Plasmid (m): sc-45987-SH, PEN-2 shRNA (h) Lentiviral Particles: sc-45986-V and PEN-2 shRNA (m) Lentiviral Particles: sc-45987-V.

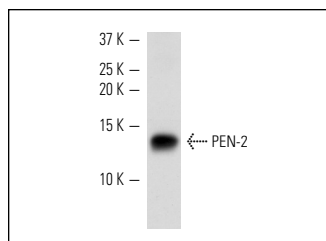
Molecular Weight of PEN-2: 12 kDa.

Positive Controls: mouse placenta extract: sc-364247.

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



PEN-2 (FL-101): sc-32946. Western blot analysis of PEN-2 expression in mouse placenta tissue extract.

SELECT PRODUCT CITATIONS

1. Sutinen, E.M., et al. 2012. Pro-inflammatory interleukin-18 increases Alzheimer's disease-associated amyloid- β production in human neuron-like cells. *J. Neuroinflammation* 9: 199.
2. Lee, H.R., et al. 2012. Altered expression of γ -secretase components in animal model of major depressive disorder induced by reserpine administration. *Lab. Anim. Res.* 28: 109-114.
3. Yan, R., et al. 2013. Presenilins are novel substrates for TRAF6-mediated ubiquitination. *Cell. Signal.* 25: 1769-1779.

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.

MONOS
Satisfaction
Guaranteed

Try **PEN-2 (1C12-G5): sc-293392**, our highly recommended monoclonal alternative to PEN-2 (FL-101).