



PEN-2 (1C12-G5): sc-293392

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

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- Hasegawa, H., et al. 2004. Both the sequence and length of the C terminus of PEN-2 are critical for intermolecular interactions and function of presenilin complexes. *J. Biol. Chem.* 279: 46455-46463.
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CHROMOSOMAL LOCATION

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

SOURCE

PEN-2 (1C12-G5) is a mouse monoclonal antibody raised against amino acids 1-101 of PEN-2 of human origin.

PRODUCT

Each vial contains 100 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PEN-2 (1C12-G5) 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

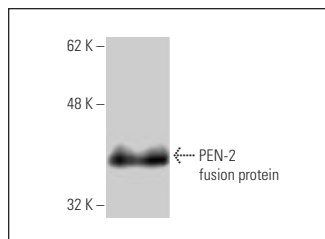
Suitable for use as control antibody for PEN-2 siRNA (h): sc-45986, PEN-2 siRNA (m): sc-45987, PEN-2 shRNA Plasmid (h): sc-45986-SH, PEN-2 shRNA Plasmid (m): sc-45987-SH, PEN-2 shRNA (h) Lentiviral Particles: sc-45986-V and PEN-2 shRNA (m) Lentiviral Particles: sc-45987-V.

Molecular Weight of PEN-2: 12 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



PEN-2 (1C12-G5): sc-293392. Western blot analysis of human recombinant PEN-2 fusion protein.

SELECT PRODUCT CITATIONS

- Karunungan, K., et al. 2023. Gamma secretase activity modulates BMP-7-induced dendritic growth in primary rat sympathetic neurons. *Auton. Neurosci.* 247: 103085.

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 for detailed protocols and support products.