SANTA CRUZ BIOTECHNOLOGY, INC.

PEN-2 (cP-16): sc-30234

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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4. Fortna, R.R., et al. 2004. Membrane topology and nicastrin-enhanced endoproteolysis of Aph-1, a component of the γ-secretase complex. J. Biol. Chem. 279: 3685-3693.
5. Bergman, A., et al. 2004. PEN-2 is sequestered in the endoplasmic reticulum and subjected to ubiquitylation and proteasome-mediated degradation in the absence of Presenilin. J. Biol. Chem. 279: 16744-16753.
6. Prokop, S., et al. 2004. Requirement of PEN-2 for stabilization of the Presenilin N/C terminal fragment heterodimer within the γ-secretase complex. J. Biol. Chem. 279: 23255-23261.
7. 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 (cP-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PEN-2 of *C. elegans* origin.

STORAGE

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

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-30234 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PEN-2 (cP-16) is recommended for detection of PEN-2 (enhancer of sel-12 null) of *Caenorhabditis elegans* 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

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.