SANTA CRUZ BIOTECHNOLOGY, INC.

Aph-1b/c (M-80): sc-134739

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Anterior pharynx defective 1 (Aph-1) is a polytopic, seven-pass membrane protein that functions as one of the four essential components in the presenilin-γ-secretase enzyme complex. This enzyme complex is necessary for the intra-membrane proteolysis of several different membrane proteins, including the β-Amyloid precursor protein, and is involved in multiple neurodevelopmental signaling pathways. Aph-1b (anterior pharynx defective 1 homolog B) and Aph-1c (anterior pharynx defective 1 homolog C) are multi-pass membrane proteins that are thought to function as a subunits of the γ-secretase complex. Consisting of 257 amino acids and existing as two alternatively spliced isoforms, Aph-1b may execute redundant functions in the cell and is implicated in neurodevelopmental disorders, such as schizophrenia.

REFERENCES

1. Shirotani, K., et al. 2004. Identification of distinct γ-secretase complexes with different Aph-1 variants. J. Biol. Chem. 279: 41340-41345.
2. Coolen, M.W., et al. 2005. Gene dosage effect on γ-secretase component Aph-1b in a rat model for neurodevelopmental disorders. Neuron 45: 497-503.
3. Saito, S., et al. 2005. Expression profiles of two human APH1 genes and their roles in formation of Presenilin complexes. Biochem. Biophys. Res. Commun. 327: 18-22.
4. Saito, S., et al. 2005. Identification and characterization of a novel human Aph-1b splice variant lacking exon 4. Biochem. Biophys. Res. Commun. 330: 1068-1072.
5. Ellenbroek, B.A., et al. 2005. Individual differences in drug dependence in rats: the role of genetic factors and life events. Eur. J. Pharmacol. 526: 251-258.
6. Coolen, M.W., et al. 2006. Ontogenic reduction of Aph-1b mRNA and γ-secretase activity in rats with a complex neurodevelopmental phenotype. Mol. Psychiatry 11: 787-793.
7. Coolen, M.W., et al. 2006. Reduced Aph-1b expression causes tissue- and substrate-specific changes in γ-secretase activity in rats with a complex phenotype. FASEB J. 20: 175-177.

SOURCE

Aph-1b/c (M-80) is a rabbit polyclonal antibody raised against amino acids 178-257 mapping at the C-terminus of Aph-1b of mouse origin.

PRODUCT

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

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.

APPLICATIONS

Aph-1b/c (M-80) is recommended for detection of Aph-1b of mouse and rat 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); also recommended for detection of Aph-1c in mice.

Molecular Weight of Aph-1b/c: 28 kDa.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.