

Aph-1b (H-80): sc-134738

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 neuro-developmental signaling pathways. Aph-1b and Aph-1a are splice variants of Aph-1. Aph-1b specifically lacks exon 4, which encodes for the entire fourth trans-membrane domain, causing the protein to be destabilized. Deficiency of Aph-1a causes a reduction in γ -secretase activity, however deficiency of Aph-1b does not; thus, Aph-1b may execute redundant functions in the cell. Aph-1b expression and γ -secretase activity may be implicated in neuro-developmental disorders, such as schizophrenia.

REFERENCES

- Shirotani, K., et al. 2004. Identification of distinct γ -secretase complexes with different Aph-1 variants. *J. Biol. Chem.* 279: 41340-41345.
- 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.
- 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.
- 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.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: APH1B (human) mapping to 15q22.2.

SOURCE

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

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Aph-1b (H-80) is recommended for detection of Aph-1b of 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).

Suitable for use as control antibody for Aph-1b siRNA (h): sc-60190, Aph-1b shRNA Plasmid (h): sc-60190-SH and Aph-1b shRNA (h) Lentiviral Particles: sc-60190-V.

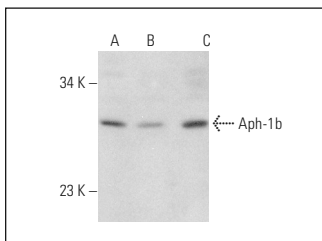
Molecular Weight of Aph-1b: 28 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

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



Aph-1b (H-80): sc-134738. Western blot analysis of Aph-1b expression in THP-1 (A), HeLa (B) and Jurkat (C) whole cell lysates.

RESEARCH USE

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