

AHCYL1 (h): 293T Lysate: sc-127950

BACKGROUND

AHCYL1 (S-adenosylhomocysteine hydrolase-like 1), also known as DCAL, IRBIT or PRO233, and SAHH-3, also known as AHCYL2 (S-adenosylhomocysteine hydrolase-like 2) are endoplasmic reticulum (ER) proteins involved in amino acid biosynthesis. Expressed in dendritic blood cells (DCs), AHCYL1 and SAHH-3 function to catalyze the H₂O-dependent conversion of S-adenosyl-L-homocysteine to L-homocysteine and adenosine, a reaction that uses NAD as a cofactor. Additionally, AHCYL1 contains a PDZ-binding domain and a PEST region through which it can interact with IP3R-I (inositol 1,4,5-trisphosphate (IP3) receptor-I), a protein involved in various signaling pathways. This interaction lowers the affinity of IP3R-1 for its substrate, IP3, thereby decreasing the rate of IP3-IP3R-I binding.

REFERENCES

1. Dekker, J.W., et al. 2002. Identification of an S-adenosylhomocysteine hydrolase-like transcript induced during dendritic cell differentiation. *Immunogenetics* 53: 993-1001.
2. Ando, H., et al. 2003. IRBIT, a novel inositol 1,4,5-trisphosphate (IP3) receptor-binding protein, is released from the IP3 receptor upon IP3 binding to the receptor. *J. Biol. Chem.* 278: 10602-10612.
3. Cooper, B.J., et al. 2006. Suppression and overexpression of adenosylhomocysteine hydrolase-like protein 1 (AHCYL1) influences zebrafish embryo development: a possible role for AHCYL1 in inositol phospholipid signaling. *J. Biol. Chem.* 281: 22471-22484.
4. Ando, H., et al. 2006. IRBIT suppresses IP3 receptor activity by competing with IP3 for the common binding site on the IP3 receptor. *Mol. Cell* 22: 795-806.
5. Shirakabe, K., et al. 2006. IRBIT, an inositol 1,4,5-trisphosphate receptor-binding protein, specifically binds to and activates pancreas-type Na⁺/HCO₃⁻ cotransporter 1 (pNBC1). *Proc. Natl. Acad. Sci. USA* 103: 9542-9547.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 607826. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: AHCYL1 (human) mapping to 1p13.3.

PRODUCT

AHCYL1 (h): 293T Lysate represents a lysate of human AHCYL1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

AHCYL1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive AHCYL1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

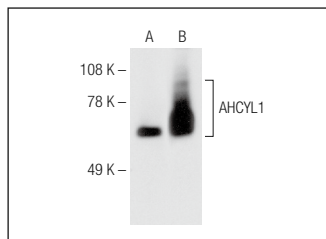
AHCYL1/SAHH-3 (D-7): sc-271581 is recommended as a positive control antibody for Western Blot analysis of enhanced human AHCYL1 expression in AHCYL1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



AHCYL1/SAHH-3 (D-7): sc-271581. Western blot analysis of AHCYL1 expression in non-transfected: sc-117752 (A) and human AHCYL1 transfected: sc-127950 (B) 293T whole cell lysates.

RESEARCH USE

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