

AHCYL1 (h4): 293T Lysate: sc-112509

BACKGROUND

AHCYL1 (S-adenosylhomocysteine hydrolase-like 1), also known as DCAL, IRBIT or PRO0233, is an endoplasmic reticulum (ER) protein that is involved in amino acid biosynthesis. Expressed in dendritic blood cells (DCs), AHCYL1 functions 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. AHCYL1 shares 100% homology with its mouse counterpart, indicating a highly conserved function between species. Two isoforms of AHCYL1 are expressed due to alternative splicing events.

REFERENCES

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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 (h4): 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 (h4): 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.

RESEARCH USE

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