

AHCYL1 (H-1): sc-514560

BACKGROUND

AHCYL1 (S-adenosylhomocysteine hydrolase-like 1), also known as DCAL, IRBIT or PRO233, 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

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.

CHROMOSOMAL LOCATION

Genetic locus: AHCYL1 (human) mapping to 1p13.3; Ahcyl1 (mouse) mapping to 3 F2.3.

SOURCE

AHCYL1 (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 46-68 near the N-terminus of AHCYL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AHCYL1 (H-1) is available conjugated to agarose (sc-514560 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514560 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514560 PE), fluorescein (sc-514560 FITC), Alexa Fluor® 488 (sc-514560 AF488), Alexa Fluor® 546 (sc-514560 AF546), Alexa Fluor® 594 (sc-514560 AF594) or Alexa Fluor® 647 (sc-514560 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514560 AF680) or Alexa Fluor® 790 (sc-514560 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514560 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

AHCYL1 (H-1) is recommended for detection of AHCYL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for AHCYL1 siRNA (h): sc-88017, AHCYL1 siRNA (m): sc-140914, AHCYL1 shRNA Plasmid (h): sc-88017-SH, AHCYL1 shRNA Plasmid (m): sc-140914-SH, AHCYL1 shRNA (h) Lentiviral Particles: sc-88017-V and AHCYL1 shRNA (m) Lentiviral Particles: sc-140914-V.

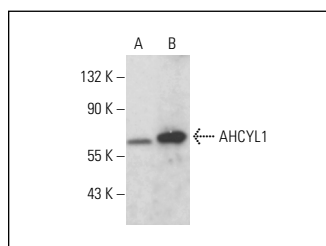
Molecular Weight of AHCYL1: 60 kDa.

Positive Controls: AHCYL1 (m): 293T Lysate: sc-118278, rat brain extract: sc-2392 or EOC 20 whole cell lysate: sc-364187.

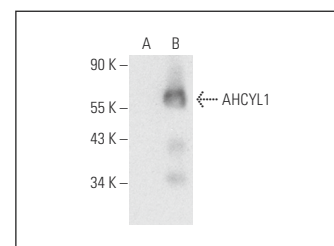
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



AHCYL1 (H-1): sc-514560. Western blot analysis of AHCYL1 expression in EOC 20 (A) whole cell lysate and rat brain tissue extract (B).



AHCYL1 (H-1): sc-514560. Western blot analysis of AHCYL1 expression in non-transfected: sc-117752 (A) and mouse AHCYL1 transfected: sc-118278 (B) 293T whole cell lysates.

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.