SANTA CRUZ BIOTECHNOLOGY, INC.

AHCYL1/SAHH-3 (D-7): sc-271581

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

AHCYL1 (S-adenosylhomocysteine hydrolase-like 1), also known as DCAL, IRBIT or PRO0233, and SAHH-3, also known as AHCYL2 (S-adenosylhomocysteine hydrolase-like 2) are endoplasmic reticulum (ER) proteins involved in amino acid biosynthesis. Expressed in dentritic blood cells (DCs), AHCYL1 and SAHH-3 function to catalyze the H_2O-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.

CHROMOSOMAL LOCATION

Genetic locus: AHCYL1 (human) mapping to 1p13.3, AHCYL2 (human) mapping to 7q32.1; Ahcyl1 (mouse) mapping to 3 F2.3, Ahcyl2 (mouse) mapping to 6 A3.3.

SOURCE

AHCYL1/SAHH-3 (D-7) is a mouse monoclonal antibody raised against amino acids 1-160 mapping at the N-terminus of AHCYL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AHCYL1/SAHH-3 (D-7) is available conjugated to agarose (sc-271581 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271581 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271581 PE), fluorescein (sc-271581 FITC), Alexa Fluor® 488 (sc-271581 AF488), Alexa Fluor® 546 (sc-271581 AF546), Alexa Fluor® 594 (sc-271581 AF594) or Alexa Fluor® 647 (sc-271581 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271581 AF680) or Alexa Fluor® 790 (sc-271581 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

AHCYL1/SAHH-3 (D-7) is recommended for detection of AHCYL1 and SAHH-3 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AHCYL1/SAHH-3 (D-7) is also recommended for detection of AHCYL1 and SAHH-3 in additional species, including equine, bovine and porcine.

Molecular Weight of AHCYL1: 60 kDa.

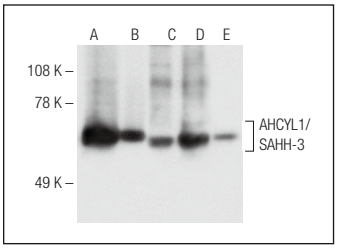
Molecular Weight of AHCYL2: 66 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, Ramos cell lysate: sc-2216 or Hep G2 cell lysate: sc-2227.

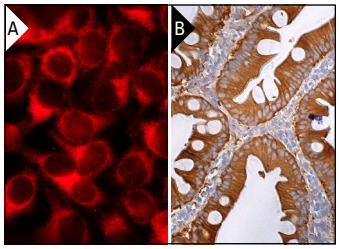
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



AHCYL1/SAHH-3 (D-7): sc-271581. Western blot analysis of AHCYL1/SAHH-3 expression in ME-180 (**A**), HEK293 (**B**), Ramos (**C**), L-428 (**D**) and Hep G2 (**E**) whole cell lysates.



AHCYL1/SAHH-3 (D-7): sc-271581. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and membrane staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Bonneau, B., et al. 2016. IRBIT controls apoptosis by interacting with the Bcl-2 homolog, Bcl2l10, and by promoting ER-mitochondria contact. Elife 5: e19896.
2. Christensen, I.B., et al. 2020. Genetic disruption of slc4a10 alters the capacity for cellular metabolism and vectorial ion transport in the choroid plexus epithelium. Fluids Barriers CNS 17: 2.

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.

PROTOCOLS

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