SANTA CRUZ BIOTECHNOLOGY, INC.

SAHH (F-11): sc-365070

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SAHH (S-adenosylhomocysteine hydrolase), also known as AHCY, is a 432 amino acid cytoplasmic protein that localizes to the melanosome, a melanin-containing organelle. An essential component of amino acid biosynthesis, SAHH catalyzes the reversible hydrolysis of S-adenosylhomocysteine (SAH) to produce adenosine and L-homocysteine. Through its catalytic activity, SAHH regulates the intracellular levels of SAH and may play a key role in controlling methyltransferase reactions. SAHH exists as a homotetramer that can bind one NAD per subunit and is involved in the activated methyl cycle (a reaction in which the methyl group of methionine is activated by the formation of S-adenosylmethionine). Defects in the gene encoding SAHH result in elevated levels of methionine which cause hypermethioninemia, a disease characterized by sluggishness, muscle weakness and liver problems.

REFERENCES

1. Elrod, P., et al. 2002. Contributions of active site residues to the partial and overall catalytic activities of human S-adenosylhomocysteine hydrolase. Biochemistry 41: 8134-8142.
2. Yang, X., et al. 2003. Catalytic strategy of S-adenosyl-L-homocysteine hydrolase: transition-state stabilization and the avoidance of abortive reactions. Biochemistry 42: 1900-1909.
3. Kloor, D., et al. 2004. S-adenosylhomocysteine hydrolase as a target for intracellular adenosine action. Trends Pharmacol. Sci. 25: 294-297.
4. Shu, S., et al. 2006. S-adenosylhomocysteine hydrolase is localized at the front of chemotaxing cells, suggesting a role for transmethylation during migration. Proc. Natl. Acad. Sci. USA 103: 19788-19793.
5. Li, Q.S., et al. 2007. Comparative kinetics of cofactor association and dissociation for the human and trypanosomal S-adenosylhomocysteine hydrolases. 1. Basic features of the association and dissociation processes. Biochemistry 46: 5798-5809.

CHROMOSOMAL LOCATION

Genetic locus: AHCY (human) mapping to 20q11.22; Ahcy (mouse) mapping to 2 H1.

SOURCE

SAHH (F-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 19-47 near the N-terminus of SAHH 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.

Blocking peptide available for competition studies, sc-365070 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

SAHH (F-11) is recommended for detection of SAHH 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 SAHH siRNA (h): sc-62972, SAHH siRNA (m): sc-62973, SAHH shRNA Plasmid (h): sc-62972-SH, SAHH shRNA Plasmid (m): sc-62973-SH, SAHH shRNA (h) Lentiviral Particles: sc-62972-V and SAHH shRNA (m) Lentiviral Particles: sc-62973-V.

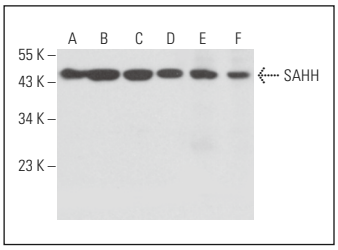
Molecular Weight of SAHH: 48 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, F9 cell lysate: sc-2245 or HeLa whole cell lysate: sc-2200.

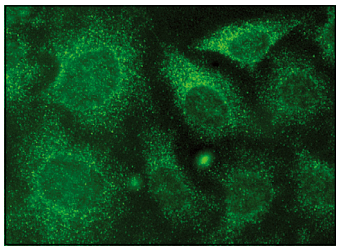
RECOMMENDED SUPPORT REAGENTS

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



SAHH (F-11): sc-365070. Western blot analysis of SAHH expression in HeLa (**A**), HL-60 (**B**), F9 (**C**) and ES-2 (**D**) whole cell lysates and rat colon (**E**) and rat testis (**F**) tissue extracts.



SAHH (F-11): sc-365070. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Brugnoli, F., et al. 2013. In triple negative breast tumor cells, PLC-β2 promotes the conversion of $CD133^{high}$ to $CD133^{low}$ phenotype and reduces the CD133-related invasiveness. Mol. Cancer 12: 165.

RESEARCH USE

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