

AdoMetDC (h): 293 Lysate: sc-110461

BACKGROUND

Polyamines are compounds that have two or more primary amino groups and are important to cellular processes, such as cellular growth, proliferation and tumor promotion. AdoMetDC (adenosylmethionine decarboxylase 1), also known as S-adenosylmethionine decarboxylase proenzyme (SAMDC) or AMD1, is a 334 amino acid protein which is an important intermediate enzyme in polyamine biosynthesis pathways. Using a pyruvoyl group as a cofactor, AdoMetDC catalyzes the conversion of S-adenosyl-L-methionine to (5-deoxy-5-adenosyl)(3-aminopropyl)-methylsulfonium salt and carbon dioxide. AdoMetDC is synthesized as an inactive proenzyme that undergoes self-maturation to form two non-identical subunits designated α and β . Active AdoMetDC forms a heterotetramer of two α chains and two β chains. Both AdoMetDC proenzyme processing and mature AdoMetDC catalytic activity are stimulated by putrescine, while catalytic activity is inhibited by iodoacetic acid.

REFERENCES

- Ekstrom, J.L., et al. 2001. Structure of a human S-adenosylmethionine decarboxylase self-processing ester intermediate and mechanism of putrescine stimulation of processing as revealed by the H243A mutant. *Biochemistry* 40: 9495-9504.
- Tolbert, W.D., et al. 2003. Mechanism of human S-adenosylmethionine decarboxylase proenzyme processing as revealed by the structure of the S68A mutant. *Biochemistry* 42: 2386-2395.
- Yerlikaya, A. and Stanley, B.A. 2004. S-adenosylmethionine decarboxylase degradation by the 26S Proteasome is accelerated by substrate-mediated transamination. *J. Biol. Chem.* 279: 12469-12478.
- Lam, K., et al. 2005. HSG cells differentiated by culture on extracellular matrix involves induction of S-adenosylmethionine decarboxylase and ornithine decarboxylase. *J. Cell. Physiol.* 203: 353-361.
- Kim, J.S., et al. 2006. S-Adenosylmethionine decarboxylase partially regulates cell growth of HL-60 cells by controlling the intracellular ROS level: Early senescence and sensitization to γ -radiation. *Arch. Biochem. Biophys.* 456: 58-70.

CHROMOSOMAL LOCATION

Genetic locus: AMD1 (human) mapping to 6q21.

PRODUCT

AdoMetDC (h): 293 Lysate represents a lysate of human AdoMetDC transfected 293 cells and is provided as 100 μ g protein in 200 μ l 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

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

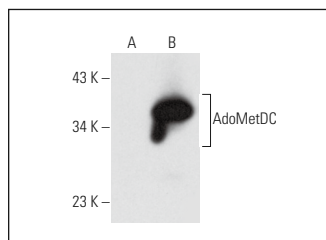
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

AdoMetDC (H-9): sc-390073 is recommended as a positive control antibody for Western Blot analysis of enhanced human AdoMetDC expression in AdoMetDC transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

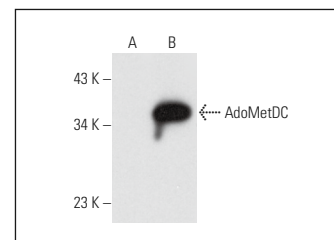
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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



AdoMetDC (H-9): sc-390073. Western blot analysis of AdoMetDC expression in non-transfected: sc-110760 (A) and human AdoMetDC transfected: sc-110461 (B) 293 whole cell lysates.



AdoMetDC (B-9): sc-377230. Western blot analysis of AdoMetDC expression in non-transfected: sc-110760 (A) and human AdoMetDC transfected: sc-110461 (B) 293 whole cell lysates.

RESEARCH USE

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