

# AdoMetDC (K-14): sc-160951

## 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  $\alpha$  and  $\beta$ . Active AdoMetDC forms a heterotetramer of two  $\alpha$  chains and two  $\beta$  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., et al. 2004. S-adenosylmethionine decarboxylase degradation by the 26S Proteasome is accelerated by substrate-mediated transamination. *J. Biol. Chem.* 279: 12469-12478.

## CHROMOSOMAL LOCATION

Genetic locus: AMD1 (human) mapping to 6q21; Amd1/Amd2 (mouse) mapping to 10 B1.

## SOURCE

AdoMetDC (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AdoMetDC of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160951 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

AdoMetDC (K-14) is recommended for detection of AdoMetDC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); also recommended for detection of Amd2 of mouse origin.

AdoMetDC (K-14) is also recommended for detection of AdoMetDC in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for AdoMetDC siRNA (h): sc-95296, AdoMetDC siRNA (m): sc-140886, AdoMetDC shRNA Plasmid (h): sc-95296-SH, AdoMetDC shRNA Plasmid (m): sc-140886-SH, AdoMetDC shRNA (h) Lentiviral Particles: sc-95296-V and AdoMetDC shRNA (m) Lentiviral Particles: sc-140886-V.

Molecular Weight of AdoMetDC proenzyme: 42 kDa.

Molecular Weight of AdoMetDC  $\alpha$ : 32 kDa.

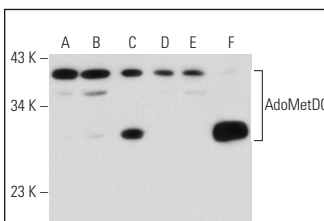
Molecular Weight of AdoMetDC  $\beta$ : 10 kDa.

Positive Controls: SW480 cell lysate: sc-2219, SK-N-MC cell lysate: sc-2237 or AdoMetDC (m2): 293T Lysate: sc-118260.

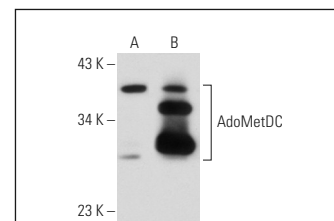
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



AdoMetDC (K-14): sc-160951. Western blot analysis of AdoMetDC expression in IMR-32 (A), HeLa (B), NIH/3T3 (C), SK-N-MC (D) and SW480 (E) whole cell lysates and mouse brain tissue extract (F).



AdoMetDC (K-14): sc-160951. Western blot analysis of AdoMetDC expression in non-transfected: sc-117752 (A) and mouse AdoMetDC transfected: sc-118260 (B) 293T whole cell lysates.

## RESEARCH USE

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