

sarcosine dehydrogenase (G-18): sc-244066

BACKGROUND

Sarcosine dehydrogenase, also known as SARDH, SAR, SDH, SARD or DMGDHL1, is a 918 amino acid protein that localizes to the mitochondrial matrix and is involved in the amine and polyamine degradation pathway. Using FAD as a cofactor, sarcosine dehydrogenase catalyzes the oxidative demethylation of sarcosine, a reaction that results in the formation of formaldehyde and glycine from sarcosine. Defects in the gene encoding sarcosine dehydrogenase are associated with sarcosinemia, a relatively benign metabolic disorder characterized by excess sarcosine in plasma and urine. The gene encoding sarcosine dehydrogenase maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

REFERENCES

- Porter, D.H., et al. 1985. Enzymatic properties of dimethylglycine dehydrogenase and sarcosine dehydrogenase from rat liver. Arch. Biochem. Biophys. 243: 396-407.
- London, R.E., et al. 1987. Metabolism of excess methionine in the liver of intact rat: an *in vivo* 2H NMR study. Biochemistry 26: 7166-7172.
- Harding, C.O., et al. 1992. sar: a genetic mouse model for human sarcosinemia generated by ethylnitrosourea mutagenesis. Proc. Natl. Acad. Sci. USA 89: 2644-2648.
- Brunialti, A.L., et al. 1996. The mouse mutation sarcosinemia (sar) maps to chromosome 2 in a region homologous to human 9q33-q34. Genomics 36: 182-184.
- Bergeron, F., et al. 1998. Molecular cloning and tissue distribution of rat sarcosine dehydrogenase. Eur. J. Biochem. 257: 556-561.

CHROMOSOMAL LOCATION

Genetic locus: SARDH (human) mapping to 9q34.2; Sardh (mouse) mapping to 2 A3.

SOURCE

sarcosine dehydrogenase (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of sarcosine dehydrogenase of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-244066 P, (100 µg 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.

RESEARCH USE

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

APPLICATIONS

sarcosine dehydrogenase (G-18) is recommended for detection of sarcosine dehydrogenase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

sarcosine dehydrogenase (G-18) is also recommended for detection of sarcosine dehydrogenase in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for sarcosine dehydrogenase siRNA (h): sc-92624, sarcosine dehydrogenase siRNA (m): sc-153223, sarcosine dehydrogenase shRNA Plasmid (h): sc-92624-SH, sarcosine dehydrogenase shRNA Plasmid (m): sc-153223-SH, sarcosine dehydrogenase shRNA (h) Lentiviral Particles: sc-92624-V and sarcosine dehydrogenase shRNA (m) Lentiviral Particles: sc-153223-V.

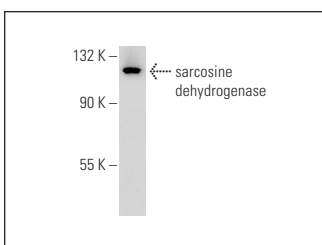
Molecular Weight of sarcosine dehydrogenase: 67 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or mouse liver extract: sc-2256.

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



sarcosine dehydrogenase (G-18): sc-244066. Western blot analysis of sarcosine dehydrogenase expression in mouse liver tissue extract.

PROTOCOLS

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