SANTA CRUZ BIOTECHNOLOGY, INC.

SDSL (B-8): sc-514341

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

L-serine dehydratase, known simply as serine dehydratase (SDS), is one of three main enzymes that are involved in the metabolism of glycine and serine. Specifically, L-serine dehydratase localizes to the liver and functions to enzymatically convert L-serine to pyruvate and ammonia in a pyridoxal phosphate-dependent manner. SDSL (serine dehydratase-like), also known as SDS-RS1 or serine dehydratase 2, is a 329 amino acid protein that, like L-serine dehydratase, uses pyridoxal phosphate. One of several members of the serine/threonine dehydratase family, SDSL may function as a serine-specific dehydratase that plays a role in protein metabolism.

REFERENCES

1. Ogawa, H., et al. 1989. Human liver serine dehydratase. cDNA cloning and sequence homology with hydroxyamino acid dehydratases from other sources. J. Biol. Chem. 264: 15818-15823.
2. Xue, H.H., et al. 1999. Flux of the L-serine metabolism in rabbit, human, and dog livers. Substantial contributions of both mitochondrial and peroxisomal serine:pyruvate/alanine:glyoxylate aminotransferase. J. Biol. Chem. 274: 16028-16033.
3. Sun, L., et al. 2003. Crystallization and preliminary crystallographic analysis of human serine dehydratase. Acta Crystallogr. D Biol. Crystallogr. 59: 2297-2299.
4. Kashii, T., et al. 2005. Some biochemical and histochemical properties of human liver serine dehydratase. Int. J. Biochem. Cell Biol. 37: 574-589.
5. López-Flores, I., et al. 2005. Serine dehydratase expression decreases in rat livers injured by chronic thioacetamide ingestion. Mol. Cell. Biochem. 268: 33-43.

CHROMOSOMAL LOCATION

Genetic locus: SDSL (human) mapping to 12q24.13.

SOURCE

SDSL (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 11-27 near the N-terminus of SDSL of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SDSL (B-8) is available conjugated to agarose (sc-514341 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514341 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514341 PE), fluorescein (sc-514341 FITC), Alexa Fluor® 488 (sc-514341 AF488), Alexa Fluor® 546 (sc-514341 AF546), Alexa Fluor® 594 (sc-514341 AF594) or Alexa Fluor® 647 (sc-514341 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514341 AF680) or Alexa Fluor® 790 (sc-514341 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514341 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

SDSL (B-8) is recommended for detection of SDSL of 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 SDSL siRNA (h): sc-96056, SDSL shRNA Plasmid (h): sc-96056-SH and SDSL shRNA (h) Lentiviral Particles: sc-96056-V.

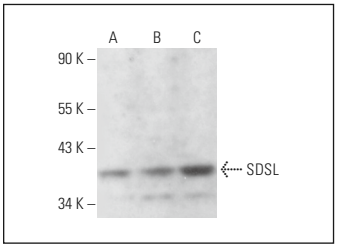
Molecular Weight of SDSL: 35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, human liver extract: sc-363766 or A-375 cell lysate: sc-3811.

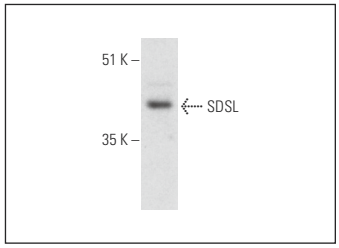
RECOMMENDED SUPPORT REAGENTS

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



SDSL (B-8): sc-514341. Western blot analysis of SDSL expression in Hep G2 (**A**), A-375 (**B**) and SK-MEL-24 (**C**) whole cell lysates.



SDSL (B-8): sc-514341. Western blot analysis of SDSL expression in human liver tissue extract.

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.