

SPSY (A-4): sc-376294

BACKGROUND

Spermine synthase (SPSY) catalyzes the production of spermine from spermidine. Spermine, a polyamine ubiquitously present in most organisms, is essential for normal cell growth and differentiation. Because absence of spermine increases sensitivity of cells to anti-tumor agents, spermine synthase (and other polyamine biosynthesis) is an attractive target for anti-neoplastic therapy.

REFERENCES

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2. Nilsson, J., Gritli-Linde, A. and Heby, O. 2000. Skin fibroblasts from spermine synthase-deficient hemizygous gyro male (Gy/Y) mice overproduce spermidine and exhibit increased resistance to oxidative stress but decreased resistance to UV irradiation. *Biochem. J.* 352: 381-387.
3. Korhonen, V.P., Niiranen, K., Halmekyto, M., Pietila, M., Diegelman, P., Parkkinen, J.J., Eloranta, T., Porter, C.W., Alhonen, L. and Janne, J. 2001. Spermine deficiency resulting from targeted disruption of the spermine synthase gene in embryonic stem cells leads to enhanced sensitivity to antiproliferative drugs. *Mol. Pharmacol.* 59: 231-238.
4. Sieler, N. 2003. Thirty years of polyamine-related approaches to cancer therapy. Retrospect and prospect. Part 1. Selective enzyme inhibitors. *Curr. Drug Targets* 4: 537-564.
5. Ikeguchi, Y., Mackintosh, C.A., McCloskey, D.E. and Pegg, A.E. 2003. Effect of spermine synthase on the sensitivity of cells to anti-tumour agents. *Biochem. J.* 373: 885-892.

CHROMOSOMAL LOCATION

Genetic locus: SMS (human) mapping to Xp22.11; Sms (mouse) mapping to X F4.

SOURCE

SPSY (A-4) is a mouse monoclonal antibody raised against amino acids 202-331 mapping near the C-terminus of SPSY of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SPSY (A-4) is available conjugated to agarose (sc-376294 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376294 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376294 PE), fluorescein (sc-376294 FITC), Alexa Fluor[®] 488 (sc-376294 AF488), Alexa Fluor[®] 546 (sc-376294 AF546), Alexa Fluor[®] 594 (sc-376294 AF594) or Alexa Fluor[®] 647 (sc-376294 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376294 AF680) or Alexa Fluor[®] 790 (sc-376294 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SPSY (A-4) is recommended for detection of Spermine synthase 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).

SPSY (A-4) is also recommended for detection of Spermine synthase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SPSY siRNA (h): sc-45279, SPSY siRNA (m): sc-45280, SPSY shRNA Plasmid (h): sc-45279-SH, SPSY shRNA Plasmid (m): sc-45280-SH, SPSY shRNA (h) Lentiviral Particles: sc-45279-V and SPSY shRNA (m) Lentiviral Particles: sc-45280-V.

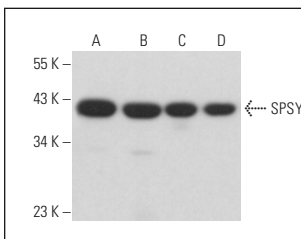
Molecular Weight of SPSY: 41 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, L6 whole cell lysate: sc-364196 or K-562 whole cell lysate: sc-2203.

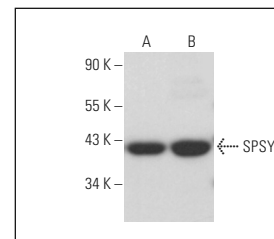
RECOMMENDED SUPPORT REAGENTS

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



SPSY (A-4): sc-376294. Western blot analysis of SPSY expression in K-562 (A), Jurkat (B), 3T3-L1 (C) and Neuro-2A (D) whole cell lysates.



SPSY (A-4): sc-376294. Western blot analysis of SPSY expression in L6 (A) and C6 (B) whole cell lysates.

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.