

# SPSY (N-17): sc-33223

## 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

1. Hamasaki-Katagiri, N., Katagiri, Y., Tabor, C.W. and Tabor, H. 1998. Spermine is not essential for growth of *Saccharomyces cerevisiae*: identification of the SPE4 gene (spermine synthase) and characterization of a spe4 deletion mutant. *Gene* 210: 195-201.
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. 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.
5. Sieler N. 2003. Thirty years of polyamine-related approaches to cancer therapy. *Curr. Drug Targets* 4: 537-564.

## CHROMOSOMAL LOCATION

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

## SOURCE

SPSY (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SPSY 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-33223 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.

## PROTOCOLS

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

## APPLICATIONS

SPSY (N-17) is recommended for detection of SPSY 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).

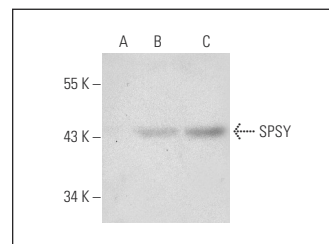
SPSY (N-17) is also recommended for detection of SPSY in additional species, including equine, canine, bovine and porcine.

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: SPSY (m): 293T Lysate: sc-123759 or HeLa whole cell lysate: sc-2200.

## DATA



SPSY (N-17): sc-33223. Western blot analysis of SPSY expression in non-transfected 293T: sc-117752 (A), mouse SPSY transfected 293T: sc-123759 (B) and HeLa (C) whole cell lysates.

## RESEARCH USE

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



Try **SPSY (A-4): sc-376294**, our highly recommended monoclonal alternative to SPSY (N-17).