

HSL (m): 293T Lysate: sc-126976

BACKGROUND

HSL (hormone-sensitive lipase), a cytosolic neutral lipase regulated by reversible phosphorylation, catalyzes the rate limiting step in triglyceride lipolysis. HSL hydrolyzes stored triglycerides to free fatty acids in adipose and heart tissues. In organs with steroidogenic tissues, such as small intestine, HSL converts cholesteryl esters to free cholesterol for steroid hormone production. HSL is highly expressed in jejunal enterocytes and in the mucosa of the small intestine. Two major isoforms of HSL have been described resulting from the use of alternative translational start codons. The short isoform is expressed in adipose tissue while the long isoform is expressed in steroidogenic tissues such as testis. The long isoform, often referred to as testicular HSL contains an N-terminus of approximately 300 amino acids not present in the short isoform of HSL.

REFERENCES

1. Langin, D., Laurell, H., Holst, L.S., Belfrage, P. and Holm, C. 1993. Gene organization and primary structure of human hormone-sensitive lipase: possible significance of a sequence homology with a lipase of *Moraxella* TA144, an antarctic bacterium. *Proc. Natl. Acad. Sci. USA* 90: 4897-4901.
2. Holst, L.S., Langin, D., Mulder, H., Laurell, H., Grober, J., Bergh, A., Mohrenweiser, H.W., Edgren, G. and Holm, C. 1996. Molecular cloning, genomic organization and expression of a testicular isoform of hormone-sensitive lipase. *Genomics* 35: 441-447.
3. Grober, J., Laurell, H., Blaise, R., Fabry, B., Schaak, S., Holm, C. and Langin, D. 1998. Characterization of the promoter of human adipocyte hormone-sensitive lipase. *Biochem. J.* 328: 453-461.
4. Shen, W.J., Patel, S., Hong, R. and Kraemer, F.B. 2000. Hormone-sensitive lipase functions as an oligomer. *Biochemistry* 39: 2392-2398.
5. Kabbaj, O., Holm, C., Vitale, M.L. and Pelletier, R.M. 2001. Expression, activity and subcellular localization of testicular hormone-sensitive lipase during postnatal development in the guinea pig. *Biol. Reprod.* 65: 601-612.
6. Grober, J., Lucas, S., Sörhede-Winzell, M., Zaghini, I., Mairal, A., Contreras, J.A., Besnard, P., Holm, C. and Langin, D. 2003. Hormone-sensitive lipase is a cholesterol esterase of the intestinal mucosa. *J. Biol. Chem.* 278: 6510-6515.
7. Vallet-Erdtmann, V., Tavernier, G., Contreras, J.A., Mairal, A., Rieu, C., Touzalin, A.M., Holm, C., Jegou, B. and Langin, D. 2004. The testicular form of hormone-sensitive lipase HSLtes confers rescue of male infertility in HSL-deficient mice. *J. Biol. Chem.* 279: 42875-42880.
8. LocusLink Report (LocusID: 3991). <http://www.ncbi.nlm.nih.gov/LocusLink/>

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: *Spry1* (mouse) mapping to 7 A3.

PRODUCT

HSL (m): 293T Lysate represents a lysate of mouse HSL transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

HSL (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive HSL antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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