

## HSL (G-7): sc-74489



The Power to Question

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: LIPE (human) mapping to 19q13.2.

## SOURCE

HSL (G-7) is a mouse monoclonal antibody raised against amino acids 476-775 mapping at the C-terminus of hormone-sensitive lipase (HSL) of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HSL (G-7) is available conjugated to agarose (sc-74489 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74489 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74489 PE), fluorescein (sc-74489 FITC), Alexa Fluor® 488 (sc-74489 AF488), Alexa Fluor® 546 (sc-74489 AF546), Alexa Fluor® 594 (sc-74489 AF594) or Alexa Fluor® 647 (sc-74489 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74489 AF680) or Alexa Fluor® 790 (sc-74489 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

HSL (G-7) is recommended for detection of HSL 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), immunohistochemistry (including paraffin-embedded sections) (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 HSL siRNA (h): sc-106861, HSL shRNA Plasmid (h): sc-106861-SH and HSL shRNA (h) Lentiviral Particles: sc-106861-V.

Molecular Weight of adipocyte HSL: 88 kDa.

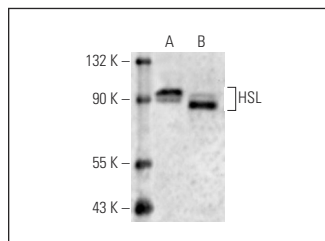
Molecular Weight of testicular HSL: 120 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, human adrenal gland extract: sc-363761 or SK-BR-3 cell lysate: sc-2218.

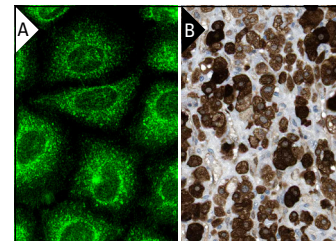
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



HSL (G-7) HRP: sc-74489 HRP. Direct western blot analysis of HSL expression in BT-20 whole cell lysate (A) and human adrenal gland tissue extract (B). Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-HRP: sc-516732.



HSL (G-7): sc-74489. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic and membrane staining of cortical cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

## SELECT PRODUCT CITATIONS

- Meilin, E., et al. 2011. Insulin increases macrophage triglyceride accumulation under diabetic conditions through the down regulation of hormone sensitive lipase and adipose triglyceride lipase. *Biofactors* 37: 95-103.
- Shimizu-Albergine, M., et al. 2012. cAMP-specific phosphodiesterases 8A and 8B, essential regulators of Leydig cell steroidogenesis. *Mol. Pharmacol.* 81: 556-566.
- Fülöp, L., et al. 2013. Extramitochondrial OPA1 and adrenocortical function. *Mol. Cell. Endocrinol.* 381: 70-79.
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- Vigelsø, A., et al. 2016. The effect of age and unilateral leg immobilization for 2 weeks on substrate utilization during moderate-intensity exercise in human skeletal muscle. *J. Physiol.* 594: 2339-2358.
- Morville, T., et al. 2017. Repeated prolonged exercise decreases maximal fat oxidation in older men. *Med. Sci. Sports Exerc.* 49: 308-316.
- Huang, X., et al. 2017. Chronic high dose zinc supplementation induces visceral adipose tissue hypertrophy without altering body weight in mice. *Nutrients* 9: 1138.
- Larsen, S., et al. 2018. Simvastatin-induced Insulin resistance may be linked to decreased lipid uptake and lipid synthesis in human skeletal muscle: the LIFESTAT study. *J. Diabetes Res.* 2018: 9257874.

## RESEARCH USE

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