

# Perilipin (G-2): sc-390169

## BACKGROUND

The PAT (Perilipin, adipophilin, TIP47) family proteins are evolutionary related proteins associated with lipid droplets and implicated in intracellular lipid metabolism. The phosphoprotein Perilipin (Peri), also designated lipid droplet-associated protein, belongs to the Perilipin subfamily of proteins. Perilipin localizes on the surface of intracellular lipid droplets within adipocytes, where it protects lipid storage droplets by coating them in adipocytes until they are digested by hormone sensitive lipase (HSL), thereby modulating adipocyte lipid metabolism. As a critical regulator of lipolysis, elevated Perilipin levels have been linked to obesity, as the absence results in leanness. In its phosphorylated state, Perilipin is maximally sensitive to HSL.

## CHROMOSOMAL LOCATION

Genetic locus: PLIN1 (human) mapping to 15q26.1.

## SOURCE

Perilipin (G-2) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Perilipin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Perilipin (G-2) is available conjugated to agarose (sc-390169 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390169 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390169 PE), fluorescein (sc-390169 FITC), Alexa Fluor® 488 (sc-390169 AF488), Alexa Fluor® 546 (sc-390169 AF546), Alexa Fluor® 594 (sc-390169 AF594) or Alexa Fluor® 647 (sc-390169 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390169 AF680) or Alexa Fluor® 790 (sc-390169 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Perilipin (G-2) is recommended for detection of Perilipin 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 Perilipin siRNA (h): sc-61322, Perilipin shRNA Plasmid (h): sc-61322-SH and Perilipin shRNA (h) Lentiviral Particles: sc-61322-V.

Molecular Weight of Perilipin: 57 kDa.

Positive Controls: human Perilipin transfected HEK293T whole cell lysate.

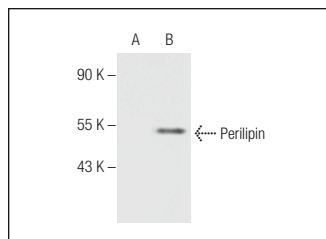
## STORAGE

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

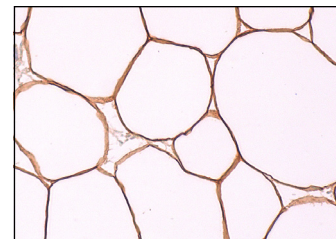
## RESEARCH USE

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

## DATA



Perilipin (G-2): sc-390169. Western blot analysis of Perilipin expression in non-transfected (A) and human Perilipin transfected (B) HEK293T whole cell lysates.



Perilipin (G-2): sc-390169. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adipose tissue showing cytoplasmic and membrane staining of adipocytes.

## SELECT PRODUCT CITATIONS

- Gorres-Martens, B.K., et al. 2018. Exercise prevents HFD- and OVX-induced type 2 diabetes risk factors by decreasing fat storage and improving fuel utilization. *Physiol. Rep.* 6: e13783.
- Sugihara, M., et al. 2019. The AAA<sup>+</sup> ATPase/ubiquitin ligase mysterin stabilizes cytoplasmic lipid droplets. *J. Cell Biol.* 218: 949-960.
- Chhabra, R. and Nanjundan, M. 2020. Lysophosphatidic acid reverses Temsirolimus-induced changes in lipid droplets and mitochondrial networks in renal cancer cells. *PLoS ONE* 15: e0233887.
- Xiang, Y., et al. 2020. 2,3,5,6-tetramethylpyrazine improves diet-induced whole-body Insulin resistance via suppressing white adipose tissue lipolysis in mice. *Biochem. Biophys. Res. Commun.* 532: 605-612.
- Nuber, S., et al. 2021. A stearyl-CoA desaturase inhibitor prevents multiple Parkinson's disease-phenotypes in  $\alpha$ -synuclein mice. *Ann. Neurol.* 89: 74-90.
- Sferra, R., et al. 2021. Prolonged chronic consumption of a high fat with sucrose diet alters the morphology of the small intestine. *Int. J. Mol. Sci.* 22: 7280.
- Kislev, N., et al. 2021. Exploring the cell stemness and the complexity of the adipose tissue niche. *Biomolecules* 11: 1906.
- Wang, Y., et al. 2022. AdipoRon exerts opposing effects on Insulin sensitivity via fibroblast growth factor FGF21-mediated time-dependent mechanisms. *J. Biol. Chem.* 298: 101641.
- Dong, X., et al. 2023. Improving fat transplantation survival and vascularization with adenovirus E4<sup>+</sup> endothelial cell-assisted lipotransfer. *Cells Tissues Organs* 212: 341-351.

## PROTOCOLS

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