

# Perilipin (N-14): sc-47322

## 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 sub-family of proteins. It 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. When the protein is in its phosphorylated state, it is maximally sensitive to HSL.

## REFERENCES

1. Qi, L., et al. 2004. Gender-specific association of a Perilipin gene haplotype with obesity risk in a white population. *Obes. Res.* 12: 1758-1765.
2. Tansey, J.T., et al. 2004. The central role of Perilipin in lipid metabolism and adipocyte lipolysis. *IUBMB Life* 56: 379-385.
3. Sengenès, C., et al. 2005. Natriuretic peptides: a new lipolytic pathway in human fat cells. *Med. Sci.* 21: 61-65.
4. Robenek, H., et al. 2005. PAT family proteins pervade lipid droplet cores. *J. Lipid. Res.* 46: 1331-1338.
5. Qi, L., et al. 2005. Intragenic linkage disequilibrium structure of the human Perilipin gene (PLIN) and haplotype association with increased obesity risk in a multiethnic Asian population. *J. Mol. Med.* 83: 448-456.
6. Meadows, J.W., et al. 2005. Expression and localization of adipophilin and Perilipin in human fetal membranes: association with lipid bodies and enzymes involved in prostaglandin synthesis. *J. Clin. Endocrinol. Metab.* 90: 2344-2350.
7. Adler-Wailes, D.C., et al. 2005. Effects of the human immunodeficiency virus-protease inhibitor, ritonavir, on basal and catecholamine-stimulated lipolysis. *J. Clin. Endocrinol. Metab.* 90: 3251-3261.
8. Wolins, N.E., et al. 2005. S3-12, Adipophilin, and TIP47 package lipid in adipocytes. *J. Biol. Chem.* 280: 19146-19155.

## CHROMOSOMAL LOCATION

Genetic locus: PLIN (human) mapping to 15q26.1; Plin (mouse) mapping to 7 D3.

## SOURCE

Perilipin (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Perilipin 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-47322 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Perilipin (N-14) is recommended for detection of Perilipin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Perilipin (N-14) is also recommended for detection of Perilipin in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Perilipin siRNA (h): sc-61322, Perilipin siRNA (m): sc-61323, Perilipin shRNA Plasmid (h): sc-61322-SH, Perilipin shRNA Plasmid (m): sc-61323-SH, Perilipin shRNA (h) Lentiviral Particles: sc-61322-V and Perilipin shRNA (m) Lentiviral Particles: sc-61323-V.

Molecular Weight of Perilipin: 57 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Gálvez-Montón, C., et al. 2011. Transposition of a pericardial-derived vascular adipose flap for myocardial salvage after infarct. *Cardiovasc. Res.* 91: 659-667.

## 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.

## PROTOCOLS

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



Try **Perilipin (G-2): sc-390169**, our highly recommended monoclonal alternative to Perilipin (N-14).