

Product Information

Anti-Perilipin A

Developed in Rabbit
Affinity Isolated Antibody

Product Number **P 1998**

Product Description

Anti-Perilipin A is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 492-505 of human perilipin A with C-terminal added cysteine, conjugated to KLH. The corresponding sequence differs by one residue in mouse and rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Perilipin A recognizes mouse perilipin A by various applications include immunoblotting (~62 kDa) and indirect immunofluorescence. Detection of the perilipin A band by immunoblotting is specifically inhibited with the immunizing peptide.

Adipose tissue has important roles in energy storage, fat metabolism and glucose homeostasis. It is a complex highly active metabolic and endocrine organ. Fat cells produce and secrete many physiologically important proteins including several hormones and adipokines. Perilipin is an intracellular neutral lipid storage droplet surface protein in white and brown fat adipocytes. It is also found in lower quantity coating droplets in steroidogenic-cells of the adrenal cortex, ovaries, and testicular Leydig cells, on the surface of smaller droplets containing cholesteryl esters.^{1, 2} Perilipin has multiple isoforms, resulting from differential splicing events. Perilipin A is most abundant in adipocytes and steroidogenic cells. Perilipin B is a minor form in adipocytes. Steroidogenic cells selectively express perilipins C and D.³⁻⁵ Perilipin is a gatekeeper protein that is involved in regulating triacylglycerol storage in adipocyte through the suppression of basal lipolysis apparently through

protecting triacylglycerol against hydrolysis. Perilipin also enhances c-AMP-dependent protein kinase (PKA)-stimulated lipolysis by hormone-sensitive lipase (HSL) and non-HSLs.⁶⁻⁸ Perilipin knockout mice exhibit reduced adipose tissue mass and resistance to diet-induced obesity. Their lipid storage droplets are coated with adipose differentiation-related protein (ADRP, adipophilin), which is not phosphorylated by PKA.^{9, 10}

Reagent

Anti-Perilipin A is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: approx. 1.0 mg/ml

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody concentration of 1-2 µg/ml is recommended using a whole extract of differentiated mouse NIH-3T3 -L1 cells and a chemiluminescent detection reagent.

By indirect immunofluorescence, a working antibody concentration of 5-10 µg/ml is recommended using differentiated mouse NIH-3T3-L1 cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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KAA/RM 12/04

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