

# #4854

## Perilipin

### Mouse Monoclonal Antibody



**Background:** Lipid droplets are coated with a layer of proteins that regulate their growth and metabolism. The major lipid droplet-associated protein in adipocytes is perilipin<sup>1</sup>. Mice in which the endogenous gene for perilipin is knocked out have a lean phenotype due to reduced accumulation of fat<sup>2,3</sup>, suggesting that perilipin may have a “gate-keeper” function under basal conditions to protect the triglycerides from metabolism by lipases.

**Immunogen:** Monoclonal antibodies were produced by immunizing mice with a synthetic peptide corresponding to the region surrounding serine 497 of the human perilipin sequence.

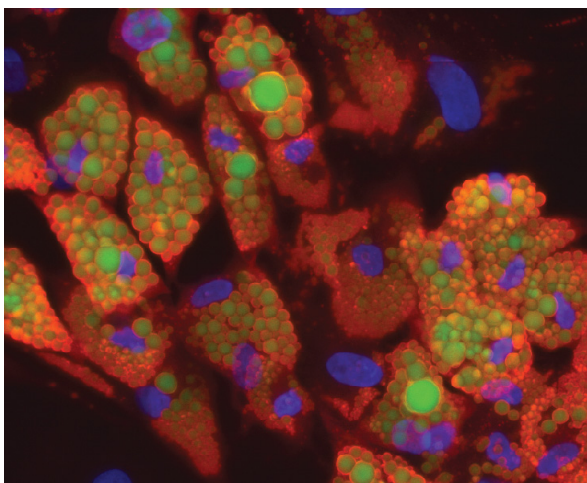
**Subtype/Specificity:** Murine IgG1, recognizes full length Perilipin A

**Species Cross Reactivity:** Tested successfully in Human, Mouse

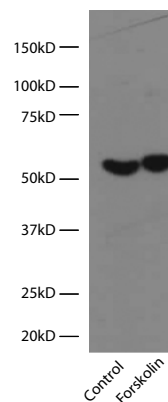
**Applications:** Immunofluorescence, Western Blotting

<b>Recommended Dilutions:</b> Immunofluorescence	1:300
Western Blotting	1:5,000

**Storage:** Store at 4°C



Human Subcutaneous Adipocytes stained for nuclei (blue), lipid droplets (green), and perilipin (red) using Vala Sciences' lipid droplets staining kit (Cat#4805) and mouse monoclonal antibody to perilipin (Cat# 4854).



Western Blotting of protein extracts from 3T3L1 cells that were differentiated into adipocytes and treated with and without 6μM Forskolin. Mouse monoclonal antibody #4854 to perilipin recognizes a distinct band at approx. 57Kd.

#### Background References:

1. Bickel PE, Tansey JT, Welte MA. PAT proteins, an ancient family of lipid droplet proteins that regulate cellular lipid stores. *Biochim Biophys Acta*. Jun 2009;1791(6):419-440.
2. Tansey JT, Sztalryd C, Gruija-Gray J, et al. Perilipin ablation results in a lean mouse with aberrant adipocyte lipolysis, enhanced leptin production, and resistance to diet-induced obesity. *Proc Natl Acad Sci U S A*. May 22 2001;98(11):6494-6499.
3. Martinez-Botas J, Anderson JB, Tessier D, et al. Absence of perilipin results in leanness and reverses obesity in *Lepr(db/db)* mice. *Nat Genet*. Dec 2000;26(4):474-479.