Product datasheet

anti-Perilipin 2 (mouse N-terminus) guinea pig polyclonal, serum

Short overview

Cat. No.	GP42
Quantity	100 µl

Product description

Host	Guinea pig
Antibody Type	Polyclonal
Immunogen	Synthetic peptide (N-terminal aa 1-16 of murine adipophilin, also named PLIN2): MAAAVVDPQQSVVMRV-C
Formulation	Contains 0.09% sodium azide and 0.5% BSA
UniprotID	P43883 (Mouse)
Synomym	Perilipin-2, Adipophilin, Adipose differentiation-related protein, ADRP, PLIN2, ADFP
Note	Centrifuge prior to opening
Conjugate	Unconjugated
Purification	Stabilized antiserum
Storage	Short term at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles
Intended use	Research use only
Application	ICC/IF, IHC, WB
Reactivity	Mouse

Applications

Immunocytochemistry (ICC)	1:50-1:100
Immunohistochemistry (IHC) - paraffin	1:50-1:100 (microwave treatment recommended)
Western Blot (WB)	1:500-1:3,000

Background

Adipophilin / ADRP / PLIN2 (a member of the PLIN/PAT family) is a ubiquitous component of lipid droplets. It has been found in milk fat globule membranes and on the surface of lipid droplets in various cultured cell lines (see e.g. Heid et al.1998, 2013; Chong et al.).Polypeptide reacting: Specific for Adipophilin / ADRP / PLIN2, MW 46,646 (calculated from aa sequence data); apparent Mr 50,000 (after SDS-PAGE); pI 6.42.Tissue immunolocalization: Adipophilin / PLIN2 is positively detected in the glandular cells of lactating mammary gland (ductal cells are negative), zona fasciculata of the adrenal gland, Sertoli cells of the testis, and in fat-accumulating hepatocytes; adipocytes are negative.

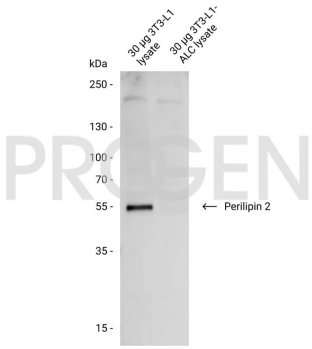
Reactivity on cultured cell lines: 3T3-L1, OP9, HL-1

Heid, H. et al. Lipid droplets, perilipins and cytokeratins--unravelled liaisons in epithelium-derived cells. PLoS One 8, (2013).

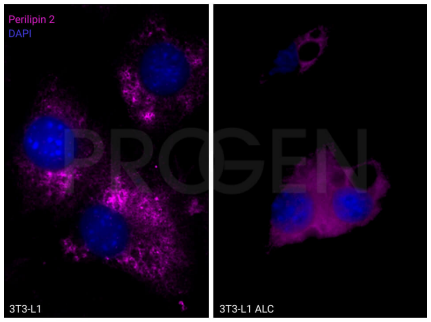
Chong, B. M. et al. The adipophilin C terminus is a self-folding membrane-binding domain that is important for milk lipid secretion. J. Biol. Chem. 286, 23254-23265 (2011).

Heid, H. W., Moll, R., Schwetlick, I., Rackwitz, H. R. & Keenan, T. W. Adipophilin is a specific marker of lipid accumulation in diverse cell types and diseases. Cell Tissue Res. 294, 309-21 (1998).

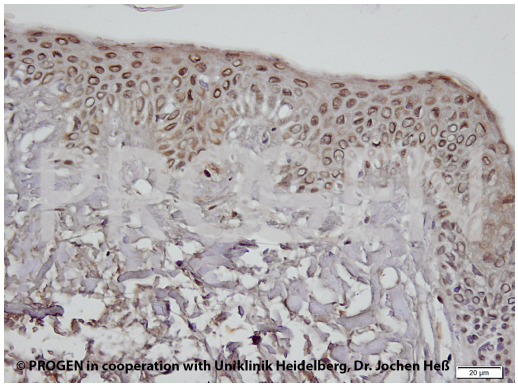
Product images



Western blot analysis of undifferentiated 3T3-L1 and differentiated 3T3-L1 ALC (= adipocyte like cells) cell lysate with anti-Perilipin 2 antibody (Cat. No. GP42). Western blot analysis was performed on 30 ug of cell lysate. Cells were lysed with RIPA buffer. The PVDF membrane was blocked with 5% dry milk in PBST (PBS + 0.1% Tween 20) for 1 h at RT. The primary antibody anti-Perilipin 2 (Cat. No. GP42) was diluted in blocking buffer (1:500) and incubated at 4°C over-night. The secondary antibody goat anti-guinea pig HRP (Cat. No. 90001) was also diluted in blocking buffer (1:2,500) and incubated for 1 h at RT. The bands were visualized by chemiluminescent detection using PierceTM ECL Western Blotting Substrate.



Immunofluorescence analysis of undifferentiated 3T3-L1 cells and differentiated 3T3-L1 ALC (= adipocyte like cells) cells with anti-Perilipin 2 antibody (Cat. No. GP42). The cells were differentiated using medium containing 0.5 mM IBMX, 1 uM dexamethanosone and 10 ug/ml insulin. Fixation was performed using 3% paraformaldehyde for 15 min at RT. Cells were blocked with 5% BSA in PBST (PBS + 0.1% Tween 20) for 1 h at RT and permeabilized with 0.3% Triton-x 100 in PBS for 10 min at RT. The primary antibody anti-Perilipin 2 guinea pig polyclonal (Cat. No. GP42) was 1:100 diluted in blocking buffer and incubated over-night at 4°C. The secondary antibody donkey anti-guinea pig AF647 was also diluted in blocking buffer (antibody concentration 3.75 ug/ml) and incubated for 30 min at 37°C and 30 min at RT. DNA was stained with DAPI in blue.



Human skin (courtesy of J. Hess, University Hospital Heidelberg)

References

Publication	Species	Application
Liu, Y. et al. A C9orf72-CARM1 axis regulates lipid metabolism under glucose starvation-induced nutrient stress. Genes.Dev. 32, 1380-1397 (2018)	human,mouse	WB