Product datasheet

anti-Perilipin 1 (N-terminus) mouse monoclonal, PERI 112.17, liquid, purified

Short overview

Cat. No.	690156
Quantity	1 ml
Concentration	100 µg/ml (100 µg)

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG1
Clone	PERI 112.17
Immunogen	Synthetic peptide of perilipin / PLIN1 (duplicated N-terminus of perilipin; aa 1-20)
Formulation	PBS buffer, pH 7.4 with 0.09% sodium azide and 0.5% BSA
UniprotID	O60240 (Human), Q8CGN5 (Mouse)
Synomym	Perilipin-1, Lipid droplet-associated protein, PLIN1, PERI, PLIN
Conjugate	Unconjugated
Purification	Affinity chromatography
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
Reactivity	Human, Mouse

Applications

Immunocytochemistry (ICC)	Assay dependent
Immunohistochemistry (IHC) - frozen	1:200 (0.5 µg/ml)
Immunohistochemistry (IHC) - paraffin	1:200 (0.5 µg/ml, microwave treatment recommended)

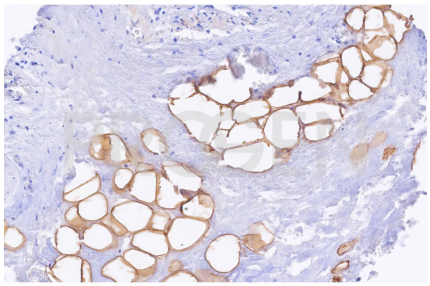
Background

Perilipins build a family of phosphoproteins. The predominant forms in adipocytes, PLIN1 A and B arise by alternative RNA splicing from a single gene, generating polypeptides of 57 kDa and 46 kDa, respectively. The N-terminus, however, remains unchanged.

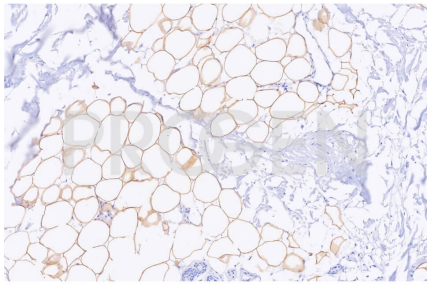
The antibody reacts specifically with all PLIN1 variants located at the surface of intracellular storage lipid droplets present e.g. in the adrenal gland, sebaceous gland, adipocytes of white and brown adipose tissue and cultured cells such as 3T3-L1 adipocytes and cultured steroidogenic adrenal cortical and Leydig cells. It is also a useful pathological marker for steatogenesis e.g. in liver. It does not cross-react with adipophilin (ADRP, also named PLIN2) or TIP47 (also named PLIN3) proteins (or additional members of the PLIN/PAT-family, e.g. MLDP or OXPAT/PAT-1, also named PLIN5 or LSDP5).

Tested reactivity on cultured cell lines: several human carcinoma cell lines; 3T3-L1 adipocytes.

Product images



IHC analysis of human adipocytes in white adipose tissue of tumor microenvironment using anti-Perilipin 1 (N-terminus) antibody. IHC was performed on formalin fixed paraffin embedded sections. The samples were deparaffinized with xylol and ethanol followed by heat induced antigen retrieval with 10 mM citrate buffer. After preparation the tissue was blocked with normal serum for 20 min at RT. The primary antibody anti-Perilipin 1 (N-terminus), PERI 112.17 (Cat. No. 690156) was diluted in PBS (antibody concentration 500 ng/ml) and incubated at 4°C over-night. The secondary antibody ImmPRESS HRP anti-mouse IgG was incubated for 20 min at RT. Slides were incubated with DAB solution until a brown staining is visable and with Haemalaun for a few minutes. The 10x picture was acquired using microscopy (courtesy of J. Hess, University Hospital Heidelberg).



IHC analysis of human cutaneous skin using anti-Perilipin 1 (N-terminus) antibody. IHC was performed on formalin fixed paraffin embedded sections. The samples were deparaffinized with xylol and ethanol followed by heat induced antigen retrieval with 10 mM citrate buffer. After preparation the tissue was blocked with normal serum for 20 min at RT. The primary antibody anti-Perilipin 1 (N-terminus), PERI 112.17 (Cat. No. 690156) was diluted in PBS (antibody concentration 500 ng/ml) and incubated at 4°C over-night. The secondary antibody ImmPRESS HRP anti-mouse IgG was incubated for 20 min at RT. Slides were incubated with DAB solution until a brown staining is visable and with Haemalaun for a few minutes. The 10x picture was acquired using microscopy (courtesy of J. Hess, University Hospital Heidelberg).

References

Publication	Species	Application
Combot, Y. et al. Seipin localizes at endoplasmic-reticulum-mitochondria contact sites to control mitochondrial calcium import and metabolism in adipocytes. Cell Rep. 38, (2022).	Mouse	PLA
Nishimoto, K. et al. Dynamics of vitamin A uptake, storage, and utilization in vocal fold mucosa. Mol Metab. 40, 101025(2020).	rat	IHC (frozen)/IF
Wada, S. et al. Submucosal fat accumulation in human colorectal tissue and its association with abdominal obesity and insulin resistance. United.European.Gastroenterol.J. 6, 1065-1073 (2018).	human	IHC (paraffin)
Pourteymour, S. et al. Perilipin 4 in human skeletal muscle: localization and effect of physical activity. Physiol. Rep. 3, (2015).	human	IHC (paraffin)
Heid, H. et al. On the formation of lipid droplets in human adipocytes: the organization of the perilipin-vimentin cortex. PLoS One 9, e90386 (2014).	human	WB,ICC-IF