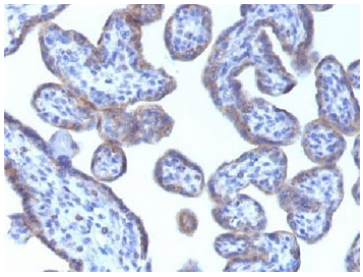
PLIN2 Antibody / Perilipin Family Protein [clone ADFP/1493] (V3206)

Catalog No.	Formulation	Size
V3206-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3206-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3206SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, lambda
Clone Name	ADFP/1493
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	123
Localization	Cytoplasmic
Applications	ELISA (order BSA/sodium azide-free format for coating) Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This PLIN2 Antibody / Perilipin Family Protein is available for research use only.



PLIN2 Antibody Human Placenta IHC. Immunohistochemical staining of FFPE human placental tissue using PLIN2 antibody (clone ADFP/1493) demonstrated predominantly cytoplasmic staining within placental trophoblasts, consistent with the localization of PLIN2 to intracellular lipid droplets. Heat-induced epitope retrieval was performed by steaming tissue sections in pH6, 10 mM citrate buffer for 10-20 minutes prior to staining. The observed staining pattern is consistent with the role of PLIN2 in lipid storage, fatty acid metabolism, and placental lipid homeostasis. This PLIN2 Antibody, also called a Perilipin Family Protein Antibody, is useful for investigating lipid droplet biology, placental physiology, and metabolic regulation.

Description

PLIN2 Antibody / Perilipin Family Protein, clone ADFP/1493, recognizes PLIN2, the gene encoding Perilipin 2, a member of the perilipin family of lipid droplet-associated proteins. PLIN2 is widely expressed in metabolically active tissues including liver, skeletal muscle, macrophages, kidney, adrenal gland, and numerous epithelial cell types, where it coats the surface of intracellular lipid droplets. By stabilizing neutral lipid stores and regulating interactions with lipid metabolic enzymes, PLIN2 plays a central role in triglyceride storage, fatty acid metabolism, and cellular energy homeostasis. Because of its broad tissue distribution and abundant expression on lipid droplets, PLIN2 has become one of the most widely studied members of the perilipin protein family.

As a perilipin family protein, PLIN2 protects lipid droplets from uncontrolled lipolysis while coordinating lipid storage and mobilization according to cellular metabolic demands. Expression is strongly induced by lipid loading, oxidative stress, and activation of lipid-responsive transcription factors, resulting in increased lipid droplet formation in many cell types. Consequently, PLIN2 serves as a sensitive marker of intracellular lipid accumulation in hepatocytes, macrophages, adipocytes, and cultured cells. Research involving PLIN2 has contributed substantially to current understanding of lipid droplet biogenesis, organelle dynamics, membrane lipid metabolism, and cellular adaptation to metabolic stress.

Altered PLIN2 expression has been associated with obesity, nonalcoholic fatty liver disease, diabetes, atherosclerosis, and numerous cancers. Many tumors accumulate abundant lipid droplets to support rapid proliferation and metabolic reprogramming, leading to increased PLIN2 expression that can be evaluated by immunohistochemistry and other laboratory methods. PLIN2 has also become an important biomarker in studies of chronic inflammation, hepatic steatosis, adrenal cortical tumors, sebaceous neoplasms, and renal cell carcinoma, where altered lipid metabolism contributes to disease progression. Ongoing investigations continue to explore the relationship between PLIN2, oxidative stress, inflammation, and tumor biology.

A PLIN2 Antibody is a valuable research tool for investigating perilipin family proteins, lipid droplet biology, lipid metabolism, cellular energy homeostasis, metabolic disease, and lipid-rich tumors.

This PLIN2 Antibody antibody complements a related Adipophilin antibody targeting ADRP, PLIN2, and Perilipin 2.

Application Notes

Titering of the PLIN2 Antibody / Perilipin Family Protein may be required for optimal performance.

Immunogen

A human partial recombinant protein was used as the immunogen for this PLIN2 antibody.

Storage

The PLIN2 antibody (with azide) can be stored at 2-8oC. The azide-free format should be aliquoted and stored at -20oC or colder.

Alternate Names

PLIN2 antibody, Perilipin Family Protein antibody, Perilipin 2 antibody, Adipophilin antibody, ADRP antibody

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