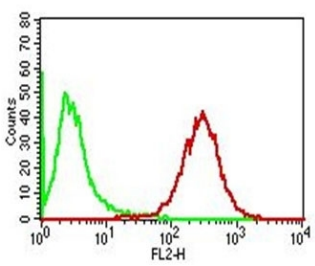
Adipophilin Antibody / Lipid Droplet Marker [clone ADFP/1365] (V7686)

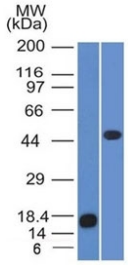
Catalog No.	Formulation	Size
V7686-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7686-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7686SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

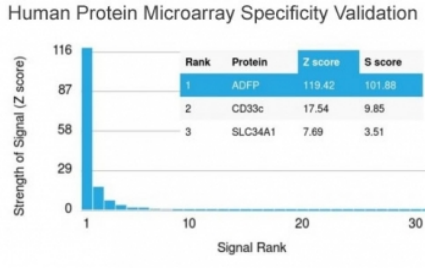
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	ADFP/1365
Purity	Protein G affinity chromatography
UniProt	Q99541
Localization	Cytoplasmic
Applications	ELISA (order BSA-free Format For Coating) : Flow Cytometry : 1-2ug/10^6 cells in 0.1ml Western Blot : 1-2ug/ml
Limitations	This Adipophilin antibody is available for research use only.



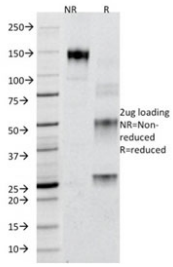
Adipophilin Antibody PBMC FACS. Flow cytometry analysis of permeabilized human peripheral blood mononuclear cells using Adipophilin antibody. The mouse monoclonal antibody clone ADFP/1365 shows a clear rightward shift compared to the isotype control, indicating intracellular detection of Adipophilin / PLIN2 within PBMC populations. This staining pattern is consistent with lipid droplet-associated protein expression in immune cells, supporting its use as a lipid droplet marker in flow cytometry applications. Red = isotype control, Blue = Adipophilin antibody.



Adipophilin Antibody Jurkat WB. Western blot analysis of recombinant partial protein (left) and human Jurkat cell lysate (right) using Adipophilin antibody. The mouse monoclonal antibody clone ADFP/1365 detects a band at approximately 48 kDa in Jurkat lysate, consistent with the predicted molecular weight of Adipophilin / PLIN2, while the lower molecular weight band in the recombinant immunogen lane reflects the truncated protein fragment used for antibody generation. Detection in Jurkat cells supports expression of this lipid droplet-associated protein in hematopoietic cell lines.



Adipophilin Antibody Protein Microarray Specificity Validation. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using Adipophilin antibody. The mouse monoclonal antibody clone ADFP/1365 shows a strong and highly specific signal for Adipophilin / PLIN2 (ADFP), with a high Z-score and clear separation from non-target proteins, confirming selective binding. The Z-score reflects signal intensity above background, while the S-score represents the degree of separation from the next highest signal, demonstrating minimal cross-reactivity in a proteome-wide context.



SDS-PAGE analysis of purified, BSA-free Adipophilin antibody (clone ADFP/1365) as confirmation of integrity and purity.

Description

Adipophilin (PLIN2), also known as adipose differentiation-related protein (ADRP) or Perilipin 2, is a lipid droplet-associated protein that plays a central role in intracellular lipid storage and metabolism. It is widely expressed in cells that accumulate neutral lipids, where it coats lipid droplets and regulates their formation, stability, and utilization. The Adipophilin Antibody / Lipid Droplet Marker is designed to detect PLIN2 in pathways associated with lipid storage, cellular metabolism, and lipid droplet biology across a range of tissue and cell types.

Adipophilin antibody, also referred to as ADRP antibody, PLIN2 antibody, or Perilipin 2 antibody in the literature, enables detection of this protein in both tissue and cell-based assays. Unlike other perilipin family members that are more restricted to adipocytes, PLIN2 is broadly expressed in non-adipose tissues, including macrophages, hepatocytes, and epithelial cells. This widespread expression makes Adipophilin a valuable marker of lipid accumulation in diverse biological systems, including metabolic tissues and immune cell populations.

Functionally, Adipophilin binds to the surface of lipid droplets and regulates access of lipases to stored lipids, thereby controlling lipid turnover and energy homeostasis. Its expression is often upregulated in response to increased lipid availability or metabolic demand, and it plays a role in lipid droplet expansion and stabilization. Adipophilin Antibody is therefore widely used to study lipid metabolism, foam cell formation, and lipid-associated cellular processes in both normal physiology and disease contexts such as atherosclerosis, fatty liver disease, and cancer.

Subcellularly, PLIN2 localizes to the surface of cytoplasmic lipid droplets, where it produces a characteristic punctate or ring-like staining pattern in immunocytochemistry and immunohistochemistry. In flow cytometry applications, intracellular staining following permeabilization allows detection of lipid droplet-associated protein expression in cell populations such as peripheral blood mononuclear cells. In western blot analysis, Adipophilin is detected as a band consistent with its predicted molecular weight, providing a complementary method for assessing expression levels in cell lysates such as Jurkat cells.

This Adipophilin antibody is supported by flow cytometry data demonstrating detection in PBMC populations, western blot data confirming expression in Jurkat cell lysates, and protein microarray specificity validation indicating selective binding to PLIN2 among a large panel of human proteins. These combined validation approaches provide confidence in specificity and performance across multiple assay formats.

Additional Adipophilin antibody reagents targeting ADRP, PLIN2, and Perilipin 2 are available for related research applications.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the Adipophilin antibody should be determined by the researcher.

Immunogen

A human recombinant partial protein (amino acids 249-376) was used as the immunogen for this Adipophilin antibody.

Storage

Store the Adipophilin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

ADRP antibody, PLIN2 antibody, Perilipin 2 antibody, Adipophilin protein antibody, Lipid droplet protein antibody