

Adipophilin

Concentrated and Prediluted Polyclonal Antibody
Control Number: 901-3138-032515

ISO
9001&13485
CERTIFIED

Catalog Number:	ACI 3138 A	API 3138 AA
Description:	0.1 ml, concentrated	6.0 ml, prediluted
Dilution:	1:100-1:200	Ready-to-use
Diluent:	Van Gogh Yellow	N/A

Intended Use:

For In Vitro Diagnostic Use

Adipophilin is a rabbit polyclonal antibody that is intended for laboratory use in the qualitative identification of adipocyte differentiation-related protein by immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests by a qualified pathologist.

Summary and Explanation:

Adipocyte differentiation-related protein (ADRP/ADFP) is associated with the globule surface membrane material. Adipophilin (also known as PLIN2) has been shown to detect the expression of ADFP in sebocytes and sebaceous lesions (1-4). Sebaceous carcinoma is a relatively uncommon cutaneous malignancy which can mimic other malignant neoplasms, such as basal and squamous cell carcinomas, as well as benign processes, such as chalazions and blepharitis, resulting in delayed diagnosis and suboptimal treatment (2). It has been reported that adipophilin was expressed in 16 of 16 (100%) sebaceous adenomas with a specific pattern of membranous staining with strong uptake at the periphery of intracytoplasmic lipid vacuoles. Of 25 sebaceous carcinomas, 23 (92%) were also labeled with a similar pattern (2). Additionally, in cases of poorly differentiated sebaceous carcinoma in which sebaceous differentiation could not have been reliably interpreted in H&E sections, adipophilin highlighted sebocytes and xanthelasma (2). Metastatic renal cell carcinomas were also stained weakly to moderately positive for adipophilin (2). Adipophilin may be a useful marker in the identification of intracytoplasmic lipids, as seen in sebaceous lesions. It is especially helpful in identifying intracytoplasmic lipid vesicles in poorly differentiated sebaceous carcinomas in challenging cases such as small periocular biopsy specimens (2,3). In addition, adipophilin has also been associated with lipid metabolism in Burkitt lymphoma and showed strong expression in the majority of Burkitt lymphomas (4). Adipophilin was also shown to be upregulated in lung adenocarcinoma and therefore may serve as a prospective marker for lung adenocarcinoma (5).

Principle of Procedure:

Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, an enzyme labeled polymer is added to bind to the primary antibody. The detection of the bound antibody is evidenced by a colorimetric reaction.

Source: Rabbit polyclonal

Species Reactivity: Human; others not tested

Clone: N/A

Isotype: IgG

Total Protein Concentration: ~10 mg/ml. Call for lot specific Ig concentration.

Epitope/Antigen: aa193-223

Cellular Localization: Cell membrane / cytoplasm

Positive Tissue Control: Skin

Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative

Storage and Stability:

Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

Protocol Recommendations:

Peroxide Block: Block for 5 minutes with Biocare's Peroxidized 1.

Pretreatment: Perform heat retrieval using Biocare's Diva Decloaker. Refer to the Diva Decloaker product data sheet for specific instructions.

Protein Block (Optional): Incubate for 5-10 minutes at RT with Biocare's Background Punisher.

Primary Antibody: Incubate for 30 minutes at RT.

Probe: N/A

Polymer: Incubate for 30 minutes at RT with a secondary-conjugated polymer.

Chromogen:

Incubate for 5 minutes at RT with Biocare's DAB – OR – Incubate for 5-7 minutes at RT with Biocare's Warp Red.

Counterstain:

Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

Technical Note:

This antibody has been standardized with Biocare's MACH 4 detection system. It can also be used on an automated staining system and with other Biocare polymer detection kits. Use TBS buffer for washing steps.

Limitations:

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Biocare products. Ultimately, it is the responsibility of the investigator to determine optimal conditions. The clinical interpretation of any positive or negative staining should be evaluated within the context of clinical presentation, morphology and other histopathological criteria by a qualified pathologist. The clinical interpretation of any positive or negative staining should be complemented by morphological studies using proper positive and negative internal and external controls as well as other diagnostic tests.

Quality Control:

Refer to CLSI Quality Standards for Design and Implementation of Immunohistochemistry Assays; Approved Guideline-Second edition (I/LA28-A2) CLSI Wayne, PA USA (www.clsi.org). 2011

Precautions:

1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN₃) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976) (6)
2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. (7)

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3. Microbial contamination of reagents may result in an increase in nonspecific staining.
4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
5. Do not use reagent after the expiration date printed on the vial.
6. The SDS is available upon request and is located at <http://biocare.net/>.

References:

1. Heid HW, *et al.* Adipophilin is a specific marker of lipid accumulation in diverse cell types and diseases. *Cell Tissue Res.* 1998 Nov; 294(2):309-21.
2. Ostler DA, *et al.* Adipophilin expression in sebaceous tumors and other cutaneous lesions with clear cell histology: an immunohistochemical study of 117 cases. *Mod Pathol.* 2010 Apr; 23(4):567-73.
3. Milman T, Schear MJ, Eagle RC Jr. Diagnostic utility of adipophilin immunostain in periocular carcinomas. *Ophthalmology.* 2014 Apr; 121(4):964-71.
4. Ambrosio MR, *et al.* The alteration of lipid metabolism in Burkitt lymphoma identifies a novel marker: adipophilin. *PLoS One.* 2012; 7(8):e44315.
5. Zhang XD, *et al.* Identification of adipophilin as a potential diagnostic tumor marker for lung adenocarcinoma. *Int J Clin Exp Med.* 2014 Apr 15; 7(4):1190-6.
6. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."
7. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.

Troubleshooting:

Follow the antibody specific protocol recommendations according to data sheet provided. If atypical results occur, contact Biocare's Technical Support at 1-800-542-2002.