

AMACR (RM)

Prediluted Rabbit Monoclonal Antibody
901-3024-051822

BIOCARE
M E D I C A L

Available Product Formats

Format	Catalog Number	Description	Dilution	Diluent
ONCORE Pro	OPAI 3024 T60	60 tests	Ready-to-use	N/A

Intended Use:

For In Vitro Diagnostic Use

AMACR (RM) [13H4] is a rabbit monoclonal antibody that is intended for laboratory use in the qualitative identification of AMACR 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:

α -Methylacyl coenzyme A racemase (AMACR), also known as P504S, is a peroxisomal and mitochondrial enzyme that plays a role in bile acid synthesis and β -oxidation of branched chain fatty acids (1). AMACR was initially identified from a cDNA library as a gene that is overexpressed in human prostate cancer; with little or no expression in normal or benign prostate glands (2-3). In immunohistochemistry, AMACR has been shown to be a marker of prostatic adenocarcinoma (2-5). Additionally, prostate glands involved in prostatic intraepithelial neoplasia (PIN), have been found to express AMACR; whereas AMACR was nearly undetectable in benign glands. (5-6).

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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, a one-step or two-step detection procedure can be applied. A one-step procedure will feature an enzyme labeled polymer that binds the primary antibody. A two-step procedure will feature a linker antibody added to bind to the primary antibody. An enzyme-labeled polymer is then added to bind the linker antibody. These detections of the bound antibodies are evidenced by a colorimetric reaction.

Source: Rabbit monoclonal

Species Reactivity: Human; others not tested

Clone: 13H4

Isotype: IgG

Protein Concentration: Call for lot specific Ig concentration.

Epitope/Antigen: AMACR

Cellular Localization: Cytoplasmic

Positive Tissue Control: Prostate cancer

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. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

Protocol Recommendations (ONCORE™ Pro Automated Slide Staining System):

OPAI3024 is intended for use with the ONCORE Pro. Refer to the User Manual for specific instructions for use. Protocol parameters in the Protocol Editor should be programmed as follows:

Protocol Name: AMACR Rb

Protocol Template (Description): Rb HRP template 1

Dewaxing (DS Option): DS Buffer

Antigen Retrieval (AR Option): AR1, high pH 103°C

Block Option: Buffer

Reagent Name, Time, Temp.: AMACR Rb, 30 min, 25°C

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.

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) (7)
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. (8)
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>.

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.

References:

1. Ferdinandusse S, et al. Subcellular localization and physiological role of alphas-methylacyl CoA racemase. J Lipid Res. 2000 Nov; 41(11):1890-6.
2. Xu J, et al. Identification of differentially expressed genes in human prostate cancer using subtraction and microarray. Cancer Res. 2000 Mar 15; 60(6):1677-82.
3. Rubin MA, et al. alpha-Methylacyl coenzyme A racemase as a tissue biomarker for prostate cancer. JAMA. 2002 Apr 3; 287(13):1662-70.
4. Luo J, et al. Alpha-methylacyl-CoA racemase: a new molecular marker for prostatic cancer. Cancer Res. 2002 Apr 15; 62(8):2220-6.
5. Zhou M, et al. Alpha-Methylacyl-CoA racemase: a novel tumor marker overexpressed in several human cancers and their precursor lesions. Am J Surg Pathol 2002 Jul; 26(7):926-31.
6. Wu CL, et al. Analysis of alpha-methylacyl-CoA racemase (P504S) expression in high-grade prostatic intraepithelial neoplasia. Hum Pathol. 2004 Aug; 35(8):1008-13.
7. 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."
8. 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.