

## P504S (P)

Concentrated and Prediluted Polyclonal Antibody  
902-200-042018

**BIOCARE**  
M E D I C A L

Catalog Number:	CP 200 A, B, C	PP 200 AA, H	IPR 200 G10	VP 200R G, G25
Description:	0.1, 0.5, 1.0 ml, concentrated	6.0, 25 ml, prediluted	10 ml, prediluted	6.0, 25 ml, prediluted
Dilution:	1:100	Ready-to-use	Ready-to-use	Ready-to-use
Diluent:	Renaissance Background Reducing Diluent	N/A	N/A	N/A

### Intended Use:

For Research Use Only. Not for use in diagnostic procedures.

### Summary and Explanation:

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

### 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. A secondary antibody may be applied to bind the primary antibody, followed by an enzyme labeled polymer; or an enzyme labeled polymer may be applied directly to bind the primary antibody. The detection of the bound primary antibody is evidenced by an enzyme-mediated 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:** P504S

**Cellular Localization:** Granular and 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. 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.

### Staining Protocol Recommendations (intelliPATH and manual use):

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

**Pretreatment:** Perform heat retrieval using Biocare's Reveal Decloaker. Refer to the Reveal 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.

### Staining Protocol Recommendations (intelliPATH and manual use) Cont'd:

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

### intelliPATH™ Automated Slide Stainer:

IPR200 is intended for use on the intelliPATH™ Automated Slide Stainer. Refer to the User Manual for specific instructions for use. When using the intelliPATH, peroxide block with intelliPATH Peroxidase Blocking Reagent (IPB5000) may be performed following heat retrieval.

### Staining Protocol Recommendations (Ventana BenchMark XT/ ULTRA Slide Staining Systems):

VP200R is intended for use with the Ventana BenchMark XT / ULTRA Slide Staining Systems. Refer to the User Manual for specific instructions for use. Recommended protocol parameters are as follows:

- Using **ultraView on XT / ULTRA:**

**Template/Detection:** ultraView DAB

**Pretreatment Protocol:** CC1 Standard

**Primary Antibody:** 32 minutes, 37°C

**ultraBlock (V-Blocker BRI4001):** Incubate for 4 minutes (with appropriate Option # registered by user)

V-Blocker is recommended to be applied prior to any detection system.

- Using **OptiView on ULTRA:**

**Template/Detection:** OptiView DAB IHC

**Pretreatment Protocol:** CC1 32 minutes

**Peroxidase:** Pre Primary Peroxidase Inhibitor

**Primary Antibody:** 16 minutes, 36°C

### Technical Note:

This antibody, for intelliPATH and manual use, has been standardized with Biocare's MACH 4 detection system. Use TBS for washing steps.

### Limitations:

This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

### 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 (NaN<sub>3</sub>) 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 in contact with sensitive areas, wash with copious amounts of water. (8)



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### Precautions Cont'd:

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>.

### Technical Support:

Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

### References:

1. Ferdinandusse S, *et al.* Subcellular localization and physiological role of  $\alpha$ -methylacyl-CoA racemase. *J Lipid Res.* 2000; 41:1890-6.
2. Xu J, *et al.* Identification of Differentially Expressed Genes in Human Prostate Cancer Using Subtraction and Microarray. *Cancer Res.* 2000; 60:1677-82.
3. Rubin MA, *et al.*  $\alpha$ -Methylacyl Coenzyme A Racemase as a Tissue Biomarker for Prostate Cancer. *JAMA.* 2002; 287:1662-70.
4. Luo J, *et al.* Alpha-methylacyl-CoA racemase: a new molecular marker for prostate cancer. *Cancer Res.* 2002; 62:2220-6.
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; 26:926-31.
6. Wu CL, *et al.* Analysis of  $\alpha$ -Methylacyl-CoA Racemase (P504S) Expression in High-Grade Prostatic Intraepithelial Neoplasia. *Hum Pathol.* 2004; 35:1008-13.
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.

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