

Prostate Specific Antigen (PSA)

Concentrated and Prediluted Rabbit Monoclonal Antibody
902-390-011718

BIOCARE
M E D I C A L

Catalog Number:	ACR 390 AK, CK	APR 390 AA
Description:	0.1, 1.0 ml, concentrated	6.0 ml, prediluted
Dilution:	1:100	Ready-to-use
Diluent:	Renoir Red	N/A

Intended Use:

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

Summary and Explanation:

PSA is a chymotrypsin-like serine protease (kallikrein family) produced by the prostate epithelium. Studies have shown that PSA is used to confirm prostatic acinar cell origin in primary and metastatic carcinomas and to rule out non-prostatic carcinoma mimics. Prostate Specific Antigen (PSA) was tested on 167 cases of prostate adenocarcinoma for specificity and sensitivity and stained 98% of all prostate cancers (Table 1).

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 monoclonal

Species Reactivity: Human, others not tested

Clone: EP109 (previously known as EP1588Y)

Isotype: IgG

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

Epitope/Antigen: Prostate specific antigen

Cellular Localization: Cytoplasmic

Positive Tissue Control: Prostate or prostate carcinoma

Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

Supplied As: Buffer with protein carrier and preservative
Renoir Red Diluent (BRR904)

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:

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 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.

Technical Note:

This antibody has been standardized with Biocare's MACH 4 detection system. Use TBS buffer for washing steps.

Limitations:

1. This antibody is to be used for paraffin-embedded tissue only and is not to be used in serum testing.

Limitations Cont'd:

2. 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 (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) (4)

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. (5)

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. Tazawa K, *et al.* Localization of prostate-specific antigen-like immunoreactivity in human salivary gland and salivary gland tumors. *Pathol Int.* 1999 Jun;49(6):500-5.

2. Siddiqui IA, *et al.* Inhibition of CWR22Rnu1 tumor growth and PSA secretion in athymic nude mice by green and black teas. *Carcinogenesis.* 2006 Apr; 27(4):833-9.

3. Ljung G, *et al.* Characterization of residual tumor cells following radical radiation therapy for prostatic adenocarcinoma; immunohistochemical expression prostatespecific antigen, prostatic acid phosphatase, and cytokeratin 8. *Prostate.* 1997 May 1;31(2):91-7.

4. 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."

5. 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.

Produced using Abcam's RabMab® technology. RabMab® technology is covered by the following U.S. Patents, No. 5,675,063 and 7,429,487.



60 Berry Drive

Pacheco, CA 94553

USA

Rev: 062117

Tel: 800-799-9499 | www.biocare.net | Fax: 925-603-8080

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Table 1:

Diagnosis	Total Cases	Positive	Negative	%+	%-
Prostate adenocarcinoma	167	163	4	98%	2%
Hyperplasia	20	20	0	100%	0%
Normal prostate	10	10	0	100%	0%
Chronic prostatitis	2	2	0	100%	0%
Stage III and IV	44	43	1	98%	2%
Gleason score 3-8	94	94	0	100%	0%
Gleason score 9-10	58	55	3	95%	5%
33 FDA normal tissue types	33	*1	32	3%	97%
Pancreatic cancers	21	0	21	0%	100%
Renal cell cancers	36	0	36	0%	100%
Colon cancers	126	0	126	0%	100%
Bladder cancers	90	0	90	0%	100%
Lung cancers	100	0	100	0%	100%
Liver cancers	16	0	16	0%	100%
Melanoma	13	0	13	0%	100%
Breast cancer	20	0	20	0%	100%
GIST	4	0	4	0%	100%
Leiomyosarcoma	4	0	4	0%	100%
Leiomyoma	4	0	4	0%	100%
Rhabdomyosarcoma	5	0	5	0%	100%
Seminoma	5	0	6	0%	100%
Stomach cancers	6	0	6	0%	100%

*Normal prostate