

# PAX8

Concentrated and Prediluted Polyclonal Antibody  
902-379-080117

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

<b>Catalog Number:</b>	<b>ACR 379 AK, CK</b>	<b>APR 379 AA</b>
<b>Description:</b>	0.1, 1.0 ml, concentrated	6.0 ml, prediluted
<b>Dilution:</b>	1:200-1:400	Ready-to-use
<b>Diluent:</b>	Van Gogh Yellow	N/A

## Intended Use:

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

## Summary and Explanation:

PAX8 is a member of the paired box (PAX) family of transcription factors. Members of this gene family typically encode proteins which contain a paired box domain, an octapeptide, and a paired-type homeodomain. This family plays critical roles during fetal development and cancer growth. PAX8 is involved in kidney cell differentiation, thyroid development, or thyroid dysgenesis. Studies show that expression of the PAX8 gene was found in 89% of analyzed tumor samples. The expression of the PAX8 target genes were found in all normal renal samples. PAX8 has been shown to be expressed in three of the most common types of renal cell carcinoma including clear cell, chromophobe and papillary carcinoma but negative for uroepithelial carcinoma of renal pelvis. PAX8 stains nuclei exclusively and performs well in formalin-fixed paraffin-embedded tissues. PAX8 has been shown to be a superior marker compared to the Renal Cell Carcinoma Marker (RCC).

## 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. This detection of the bound antibody is evidenced by a colorimetric reaction.

**Source:** Rabbit polyclonal

**Species Reactivity:** Human, mouse and dog

**Clone:** N/A

**Isotype:** N/A

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

**Epitope/Antigen:** PAX8

**Cellular Localization:** Nuclear

**Positive Control:** Renal tissue

## Known Applications:

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

**Supplied As:** Buffer with protein carrier and preservative

Van Gogh Yellow (PD902)

## 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.

## Protocol Recommendations Cont'd:

### 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 2 detection system. Use TBS buffer 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) (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. Lotan TL, *et al.* Immunohistochemical panel to identify the primary site of invasive micropapillary carcinoma. *Am J Surg Pathol.* 2009 Jul;33(7):1037-41. 2. Viktorová T, *et al.* Expression of PAX2 and PAX8 genes in conventional type of renal carcinoma and their role in the tumor prognosis. *Diagn Cytopathol.* 2008 Aug; 36 (8):568-73.

3. Narlis M, *et al.* Pax2 and Pax8 regulate branching morphogenesis and nephron differentiation in the developing kidney. *J Am Soc Nephrol.* 2007 Apr; 18(4):1121-9.



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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.