**PAX8 (M)**
Concentrated and Prediluted Monoclonal Antibody

**Control Number:** 902-438-061912

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**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.

PAX8 is expressed in a high percentage of renal cell carcinomas and ovarian cancers. This mouse monoclonal PAX8 antibody [BC12] has been designed to target a restricted epitope and exhibits higher specificity and provides sharper staining than the PAX8 rabbit polyclonal antibody. Unlike the polyclonal PAX8, this mouse monoclonal antibody does not stain B-cells, and does not recognize epitopes of pancreatic origin and neuroendocrine cells in stomach and colon; thus providing superior specificity.

The expression of the mouse monoclonal PAX8 target antigen was found in normal kidney, thyroid and cervix, but was not identified in normal ovary. By Western blot, [BC12] has been shown to recognize PAX8 and not PAX2, PAX5 or PAX6 proteins. PAX8 stains nuclei exclusively and performs well in formalin-fixed paraffin-embedded tissues.

**Source:** Mouse monoclonal

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

**Clone:** BC12

**Isotype:** IgG1

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

**Epitope/Antigen:** PAX8

**Cellular Localization:** Nuclear

**Positive Control:** Normal kidney, renal cell or serous ovarian carcinomas

**Normal Tissue:** Kidney or thyroid

**Abnormal Tissue:** Renal cell or serous ovarian carcinomas

**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 Peroxidased 1.

**Pretreatment Solution:** Revealed

**Heat Retrieval Method:**
Retrieve sections under pressure using Biocare's Decloaking Chamber, followed by a wash in distilled water. Alternatively, steam tissue sections for 45-60 minutes. Allow solution to cool for 10 minutes then wash in distilled water.

**Protein Block:**

- **Optional:** Incubate for 5-10 minutes at RT with Biocare's Background Punisher.
- **Primary Antibody:** Incubate for 30-60 minutes at RT.
- **Probe:** Incubate for 10 minutes at RT with a Probe.
- **Polymer:** Incubate for 10 minutes at RT with a Polymer.

**Incubate for 10 minutes at RT when using Biocare's DAB – OR – Incubate for 5-7 minutes at RT when using 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:**
Counterstain lightly with hematoxylin as over-staining may mask stained nuclei, especially in clear cell RCC. 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. Other retrieval solutions such as Diva may be used, but must be validated by the individual user. Extensive in-house studies have shown equal and/or superior staining compared to the rabbit polyclonal PAX8 antibody.

**Performance Characteristics:**
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 tiers 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. These products are tools that can be used for interpretation of morphological findings in conjunction with other diagnostic tests and pertinent clinical data by a qualified pathologist.

**Quality Control:**
Refer to CLSI Quality Standards for Design and Implementation of Immunohistochemistry Assays; Approved Guideline-Second edition (I/LA28-A2)

**Precautions:**
This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 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.

**Counterstain lightly with hematoxylin. Rinse with deionized water.**

**Microbial contamination of reagents may result in an increase in nonspecific staining.**

**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.

**Limitations and Warranty:**
There are no warranties, expressed or implied, which extend beyond this description. Biocare is not liable for property damage, personal injury, or economic loss caused by this product.

**References:**
References cont’d: