

# Pax-2 (EP235)

# Rabbit anti-human PAX2 Monoclonal Antibody (Clone EP235)

#### REFERENCES AND PRESENTATIONS<sup>1</sup>

 ready-to-use (manual or LabVision AutoStainer)

MAD-000650QD-3 MAD-000650QD-7 MAD-000650QD-12

Ready-to-use (MD-Stainer)<sup>2</sup>
 MAD-000650QD-3/V
 MAD-000650QD/V

concentrated
 MAD-000650Q - 1:50 recommended dilution

## **COMPOSITION**

Anti-human PAX2 rabbit monoclonal antibody purified from serum and prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide

**INTENDED USE** ND: Immunohistochemistry (IHC) on paraffin embedded tissues. Not tested on frozen tissues or Western-Blotting

**CLONE:** EP235<sup>3</sup> **Ig ISOTYPE:** Rabbit IgG

**IMMUNOGEN:** A recombinant fragment corresponding to residues in human PAX2 protein. **SPECIES REACTIVITY:** In vitro diagnostics in humans.

Not tested in other species

DESCRIPTION AND APPLICATIONS: PAX2 is a member of the paired box family of transcription factors, which is required for development and proliferation of the kidney, brain, and müllerian organs. PAX2 genes contain a highly conserved DNA sequence within the paired box region, which encodes a DNA-binding domain, enabling PAX proteins to bind the promoters of specific genes to transcriptionally regulate their expression. Defects in PAX2 gene are related with the renal coloboma syndrome (RCS) (also known as papillorenal syndrome) which is a condition that primarily affects kidney (renal) and eye development.

PAX2 is specifically expressed in the developing central nervous system, eye, ear, and urogenital tract, and is essential for the development of these organs. In normal adult tissues PAX2 was mainly detected in the urogenital system, including kidney, ureteric epithelium, fallopian tube epithelium, ovary and uterus.

In tumors, PAX2 has been detected in renal cell carcinomas, Wilms' tumors, nephrogenic adenomas and papillary serous carcinoma of the ovary. For these reasons, PAX2 has been used as a marker for the identification of renal cell carcinoma and ovarian carcinoma by immunohistochemistry. It has been also suggested as a useful tool in diagnosis and classification of hyperplastic endometrial epithelial proliferations.

IHC POSITIVE CONTROL: Kidney or normal

endometrium

**VISUALIZATION:** Nuclear

#### **IHC RECOMMENDED PROCEDURE:**

- $4\mu m$  thick section should be taken on charged slides; dry overnight at  $60^{\circ}C$
- Deparaffinise, rehydrate and HIER (heat induced epitope retrieval) boil tissue in the Pt Module using Vitro S.A EDTA buffer pH8<sup>4</sup> for 20 min at 95°C. Upon completion rinse with 3-5 changes of distilled or deionised water followed by cooling at RT for 20 min
- Endogenous peroxidase block Blocking for 10 minutes at room temperature using peroxidase solution (ref. MAD-021540Q-125)
- Primary antibody: incubate for 10 minutes [The antibody dilution (when concentrated) and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory]
- For detection use Master Polymer Plus Detection System (HRP) (DAB included; ref. MAD-000237QK)
- Counterstaining with haematoxylin and final mounting of the slide

STORAGE AND STABILITY: 

✓ Stored at 2-8°C. Do not freeze. 

✓ Once the packaging has been opened it can be stored until the expiration date of the reagent indicated on the label. If the reagent has been stored under other conditions to those indicated in this

<sup>4</sup> Ref: MAD-004072R/D



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<sup>&</sup>lt;sup>1</sup> These references are for presentation in vials of Low Density Polyethylene (LDPE) dropper. In case the products are used in automated stainers, a special reference is assigned as follows:

 <sup>/</sup>L: Cylindrical screw-cap vials (QD-3 / L, QD-7 / L, QD-12 / L).
 /N: Polygonal screw-cap vials (QD-3 / N, QD-7 / N, QD-12 / N).
 For different presentations (references / volumes) please contact the supplier.

<sup>&</sup>lt;sup>2</sup> For Technical specifications for MD-Stainer, please contact your distributor.

<sup>&</sup>lt;sup>3</sup> PAX2 Clone EP235 is manufactured using Epitomics's RabMAb® technology under U.S. Patent Nos. 5,675,063 and 7,402,409



document, the user must first check its correct performance taking into account the product warranty is no longer valid.

#### **WARNINGS AND PRECAUTIONS:**

- 1. Avoid contact of reagents with eyes and mucous membranes. If reagents come into contact with sensitive areas, wash with copious amounts of water.
- 2. This product is harmful if swallowed.
- 3. Consult local or state authorities with regard to recommended method of disposal.
- 4. Avoid microbial contamination of reagents.

#### SAFETY RECOMMENDATIONS

This product is intended for laboratory professional use only. The product is NOT intended to be used as a drug or for domestic purposes. The current version of the Safety Data Sheet for this product can be downloaded by searching the reference number at <a href="https://www.vitro.bio">www.vitro.bio</a> or can be requested at regulatory@vitro.bio.

#### **BIBLIOGRAPHY**

- 1. 1. Gruss P, Walther C. Pax in development. Cell; 69: 719-722. 1992.
- Sanyanusin P, McNoe LA, Sullivan MJ, Weaver RG, Eccles MR. Mutation of PAX2 in two siblings with renal-coloboma syndrome. Hum Mol Genet; 4: 2183-2184. 1995.
- 3. 3. Lang D, Powell SK, Plummer RS, Young KP, Ruggeri BA. PAX genes: roles in development, pathophysiology, and cancer. Biochem Pharmacol; 73: 1-14. 2007.
- 4. Tong GX, Chiriboga L, Hamele-Bena D, Borczuk AC. Expression of PAX2 in papillary serous carcinoma of the ovary: immunohistochemical evidence of fallopian tube or secondary Müllerian system origin? Mod Pathol; 20(8): 856-863. 2007.
- Sangoi AR, Karamchandani J, Kim J, Pai RK, McKenney JK. The use of immunohistochemistry in the diagnosis of metastatic clear cell renal cell carcinoma: a review of PAX-8, PAX-2, Hkim-1, RCCma, and CD10. Adv Anat Pathol; 17(6): 377-393. 2010.
- Zhai QJ, Ozcan A, Hamilton C, Shen SS, Coffey D, Krishnan B, Truong LD. PAX-2 expression in non-neoplastic, primary neoplastic, and metastatic neoplastic tissue: A comprehensive immunohistochemical study. Appl Immunohistochem Mol Morphol. 2010 Jul;18(4):323-332
- 7. 6. Upson K, Allison KH, Reed SD, Jordan CD, Newton KM, Swisher EM, Doherty JA, Garcia RL. Biomarkers of progestin therapy resistance and endometrial hyperplasia

- progression. Am J Obstet Gynecol. 2012 Jul;207(1):36.e1-8.
- Quick CM, Laury AR, Monte NM, Mutter GL. Utility of PAX2 as a marker for diagnosis of endometrial intraepithelial neoplasia. Am J Clin Pathol. 2012 Nov;138(5):678-84
- Allison KH, Upson K, Reed SD, Jordan CD, Newton KM, Doherty J, Swisher EM, Garcia RL. PAX2 loss by immunohistochemistry occurs early and often in endometrial hyperplasia. Int J Gynecol Pathol. 2012 Mar;31(2):151-159

### **LABEL AND BOX SYMBOLS**

Explanation of the symbols of the product label and box:

	Expiration date
Î	Temperature limit
***	Manufacturer
Σ	Sufficient content for <n> assays</n>
REF	Catalog number
LOT	Lot code
Ţ <u>i</u>	Refer to the instructions of use
IVD	Medical product for <i>in</i> vitro diagnosis.
e-SDS	Material safety data sheet



CE IVD