
Anti-PAX8 / DIA-PX8-OD / Clone JAX8

Mouse monoclonal antibody marker for Ovarian, Thyroid and Renal Cell Carcinoma

Product Information

Catalog No.:	DIA-PX8-OD	Presentation:	Purified antibody in Tris pH 7.3-7.7 with 1% BSA, <0.1% NaN ₃
Clone:	JAX8	Applications:	Immunohistochemistry (IHC), standard formalin-fixed paraffin sections
Isotype	Mouse IgG2a	Dilutions:	1:100 - 1:200 IHC-P
Quantity	100µl		(General recommendation, validation of antibody performance/protocol is the responsibility of the end user. Positive/negative controls should be run simultaneously with samples)
Specificity:	PAX8		
Physical State:	Liquid		
Species			
Reactivity:	Human		
Positive Control:	Ovarian Carcinoma (non-mucinous), Thyroid Carcinoma, Renal Cell Carcinoma		
Visualization:	Nuclear		

Background

Mouse monoclonal anti-PAX8 antibody clone JAX8 is suitable for the immunohistological detection of PAX8 in routine-fixed paraffin embedded tissue sections.

PAX8 is a member of the paired box (PAX) family of transcription factors involved in the regulation of early development of the thyroid gland, kidney, and Müllerian tract. PAX8 plays a central role for the expression of thyroid-specific genes and thus, in development of thyroid follicular cells. Mutations in the PAX-8 gene are linked to thyroid follicular carcinomas. In the developing kidney PAX8 is important for renal vesicle formation.

PAX8 is highly expressed in several neoplasms: Epithelial tumors of the thyroid and parathyroid glands, kidney, thymus, pancreatic neuroendocrine tumors and female genital tract. Follicular and papillary thyroid carcinoma are almost always PAX8 positive (while medullary thyroid carcinoma is negative, but anaplastic carcinoma is positive in most cases). PAX8 is also found in almost all cases of endometrial carcinoma and ovarian serous, endometrioid, transitional and clear cell carcinoma. Moreover, PAX8 is found in most cases of renal cell carcinoma (all types) and in oncocytoma as well as in thymic tumors. Different reports have shown that adenocarcinomas of lung and breast are negative for PAX8-expression. Also, PAX-8 is not found in the epithelial cells of the breast, lung, mesothelium, stomach, colon, pancreas.

PAX 8 is a useful IHC marker with a wide range of diagnostic applications and appears to be the most specific and sensitive marker for renal cell carcinoma and ovarian non-mucinous carcinoma.

Instructions for Use

Immunohistochemical staining of standard formalin-fixed paraffin sections

Deparaffinize and rehydrate according to standard procedures. Heat induced epitope retrieval (HIER) is required (pH 9-10 for 10-30 minutes). For immunohistochemical detection different techniques can be used: indirect immunoenzyme labeling with a secondary antibody conjugate, biotin/(strept)avidin-based detection, soluble enzyme immune complex or polymer-based detection. The antibody can be adapted for use on automated staining instruments.

Intended use / regulatory status

Europe: For in Vitro Diagnostic Use / All other countries: For Research Use only

Storage and Stability

Store at 2-8°C. Do not freeze. The antibody is stable until the date indicated on the label, when stored properly.

Safety Notes

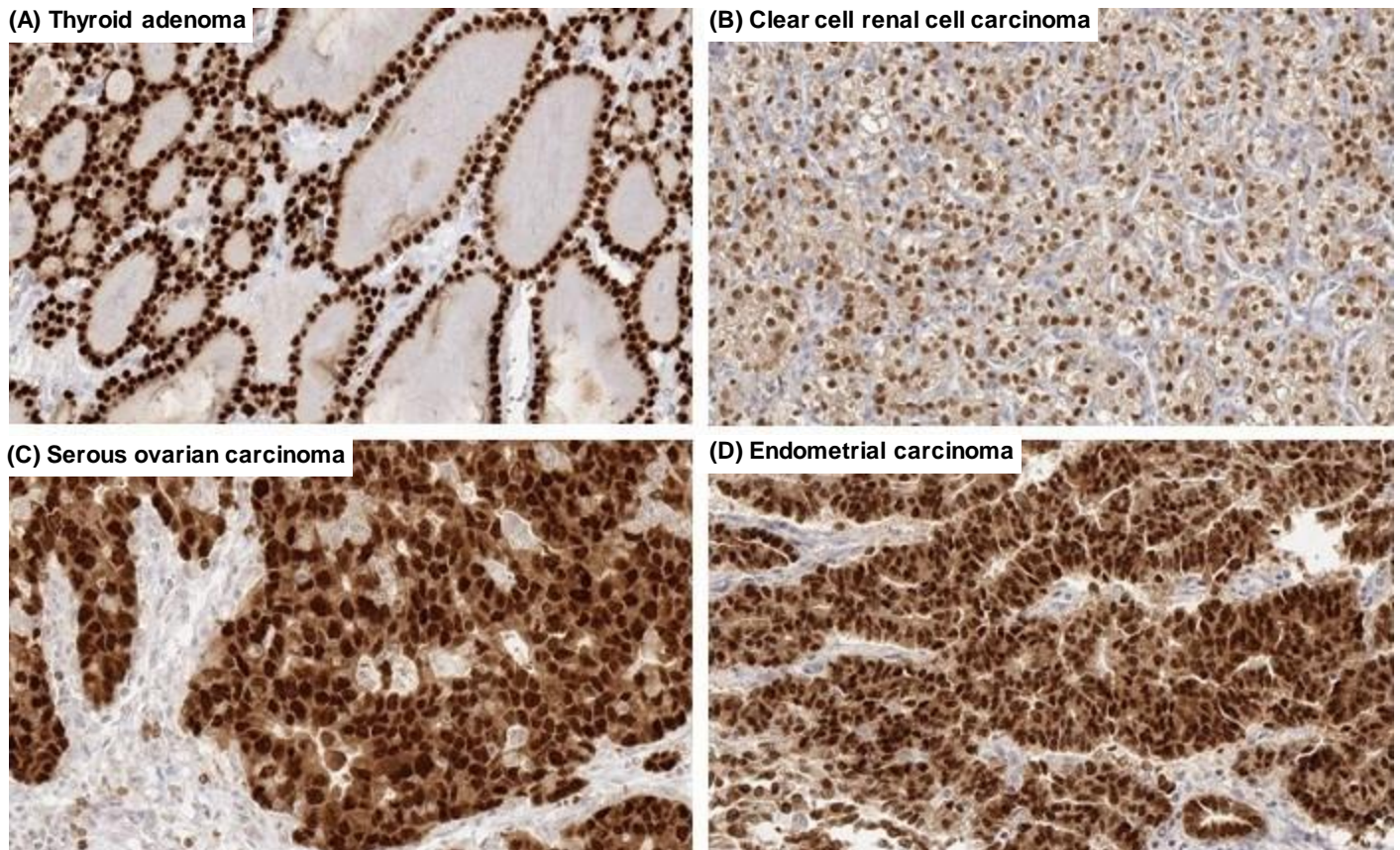
The material contains <1% sodium azide as preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material. Avoid skin and eye contact, inhalation and ingestion.



Figures

Immunohistochemistry of human PAX8 in routine formalin-fixed paraffin-embedded tissue samples

- A:** Benign thyroid adenoma with Strong nuclear PAX8 positivity.
B: Clear cell renal cell carcinoma with nuclear PAX8 staining.
C: Serous ovarian carcinoma with strong nuclear PAX8 staining.
D: Endometrial carcinoma with strong PAX8 staining.



(Pictures kindly provided by the Department of Pathology, University Hospital Eppendorf, Hamburg, Germany)

References

1. Marques AR et al. (2002) Expression of PAX8 PPAR gamma 1 rearrangements on both follicular thyroid carcinomas and adenomas. *J Clin Endocrinol Metab.* 87: 3947-3952.
2. Nikiforova MN et al. (2002) PAX8-PPARgamma rearrangement in thyroid tumors: RT-PCR and immunohistochemical analyses. *Am J Surg Pathol.* 26: 1016-1023.
3. Zhang P, et al. (2006) Immunohistochemical analysis of thyroid-specific transcription factors in thyroid tumors. *Pathol Int.* 56: 240-245.
4. Bowen NJ, et al. (2007) Emerging roles for PAX8 in ovarian cancer and endosalpingeal development. *Gynecol Oncol.* 104: 331-337.
5. Nonaka, D et al. (2008) Diagnostic utility of thyroid transcription factors Pax8 and TTF-2 (Fox E1) in thyroid epithelial neoplasms. *Mod Pathol.* 21: 192-200.
6. Nonaka D et al. (2008) Expression of pax8 as a useful marker in distinguishing ovarian carcinomas from mammary carcinomas. *Am J Surg Pathol.* 32: 1566-1571.
7. Tong GX et al. (2009) Expression of PAX8 in normal and neoplastic renal tissues: an immunohistochemical study. *Mod Pathol.* 22: 1218-1227.
8. Laury AR et al. (2011) A comprehensive analysis of PAX8 expression in human epithelial tumors. *Am J Surg Pathol.* 35: 816-826.
9. Ozcan A et al. (2011) PAX 8 expression in non-neoplastic tissues, primary tumors, and metastatic tumors: a comprehensive immunohistochemical study. *Mod Pathol.*; 24: 751-764.

