

PRODUCT INFORMATION



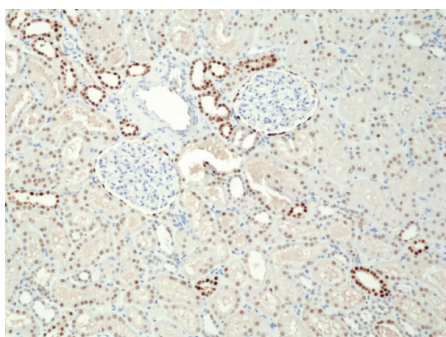
Pax8 (C-Term) Rabbit Monoclonal Antibody (Clone RM436)

Item No. 35615

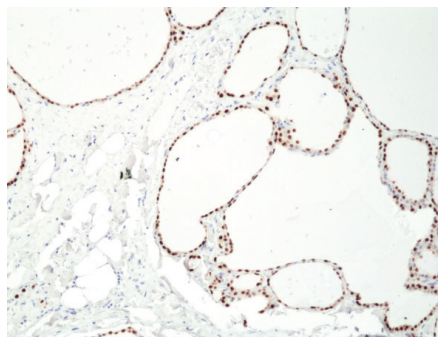
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonym:	Paired Box Protein 8
Immunogen:	A peptide from the C-terminal region of human Pax8
Cross Reactivity:	(+) Pax8
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM436
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC); the recommended starting dilution is 1:100-1:400. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Immunohistochemical staining of formalin-fixed and paraffin-embedded human kidney tissue using Pax8 (C-Term) Rabbit Monoclonal Antibody (Clone RM436) at a dilution of 1:400.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human thyroid tissue using Pax8 (C-Term) Rabbit Monoclonal Antibody (Clone RM436) at a dilution of 1:400.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/17/2024

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Paired box (Pax) protein 8 (Pax8) is a transcription factor and member of the Pax family that functions as both a transcriptional activator and repressor and has an essential role in thyroid development.^{1,2} It is composed of a DNA-binding paired domain, conserved octapeptide, partial homeodomain, transactivation domain, and an inhibitory domain.^{1,3} Alternative splicing of *PAX8* pre-mRNA encoding the C-terminus results in five isoforms with varying DNA-binding capabilities and transcriptional activities.⁴ Pax8 is expressed during the mesenchymal-to-epithelial transition in the development of various organs and localizes to the nucleus. It is involved in cell survival, differentiation, and stem cell lineage commitment.¹ Knockout of *Pax8* produces smaller thyroids without follicles in mice.⁵ *PAX8* mutations have been found in patients with thyroid dysgenesis, and chromosomal translocations leading to the fusion of *PAX8* with *PPARG*, resulting in expression of Pax8-PPAR γ fusion proteins, are associated with follicular thyroid carcinomas.^{2,6} Cayman's Pax8 (C-Term) Rabbit Monoclonal Antibody (Clone RM436) can be used for immunohistochemistry (IHC).

References

1. Robson, E.J.D., He, S.-J., and Eccles, M.R. A PANorama of PAX genes in cancer and development. *Nat. Rev. Cancer* **6**(1), 52-62 (2006).
2. Macchia, P.E., Lapi, P., Krude, H., *et al.* *PAX8* mutations associated with congenital hypothyroidism caused by thyroid dysgenesis. *Nat. Genet.* **19**(1), 83-86 (1998).
3. Poleev, A., Okladnova, O., Musti, A.M., *et al.* Determination of functional domains of the human transcription factor PAX8 responsible for its nuclear localization and transactivating potential. *Eur. J. Biochem.* **247**(3), 860-869 (1997).
4. Poleev, A., Wendler, F., Fickenscher, H., *et al.* Distinct functional properties of three human paired-box-protein, PAX8, isoforms generated by alternative splicing in thyroid, kidney and Wilms' tumors. *Eur. J. Biochem.* **228**(3), 899-911 (1995).
5. Mansouri, A., Chowdhury, K., and Gruss, P. Follicular cells of the thyroid gland require *Pax8* gene function. *Nat. Genet.* **19**(1), 87-90 (1998).
6. Kroll, T.G., Sarraf, P., Pecciarini, L., *et al.* *PAX8-PPAR γ 1* fusion in oncogene human thyroid carcinoma. *Science* **289**(5483), 1357-1360 (2000).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM