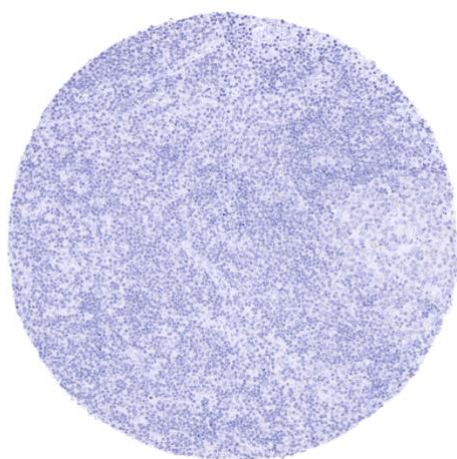


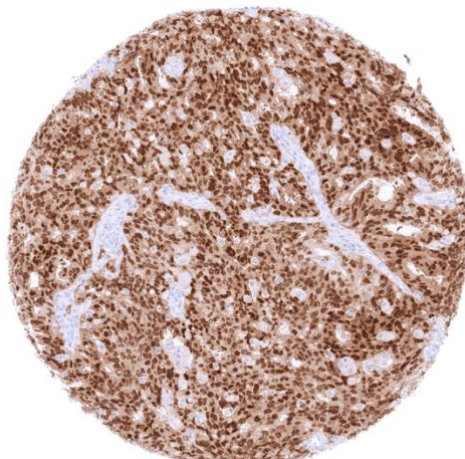
Anti- PAX8 Antibody MSVA-708R / Recombinant Rabbit monoclonal

Human SwissProt	Q06710
Human Gene Symbol	PAX8
Synonyms	Paired box gene 8; Paired domain gene 8; PAX8; paired box homeotic gene 8
Specificity	PAX8
Immunogen	Recombinant fragment of human PAX8 protein
Isotype	Rabbit / IgG
Species Reactivity	Human

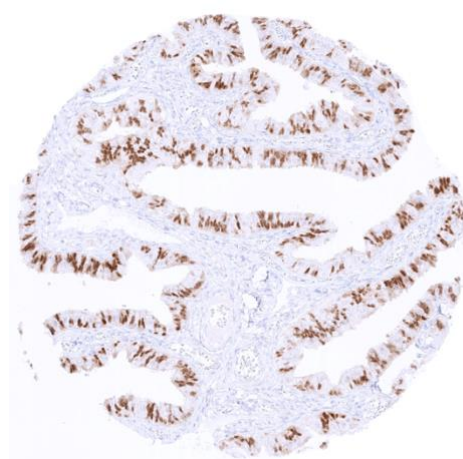
Localization	Nuclear
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available without BSA
Positive Control	Kidney: At least weak to moderate, distinct nuclear staining should be seen in the majority of epithelial cells of the proximal and distal renal tubules, collection ducts, and the parietal epithelial cells of the Bowman's capsule.
Negative Control	Tonsil: No staining should be seen in squamous epithelial cells and in lymphocytes.



PAX8 staining is completely absent in lymphocytes (lymph node)



Serous high-grade ovarian carcinoma with strong PAX8 staining of tumor cells



Strong nuclear PAX8 staining of a subset of epithelial cells in the fallopian tube

Biology

PAX8 (Paired box gene 8) is a member of the paired-box gene family. The 48kDa protein is coded by the PAX8 gene at chromosome 2q14.1. PAX8 is physiologically expressed in organ development of the thyroid, Wolffian and Mullerian tract, renal/upper urinary tract, and the inner ear, and is also required for tissue homeostasis in the respective adult tissue. PAX8 is a master transcriptional regulator of thyroid specific genes such as thyroglobulin, thyroid peroxidase, and the sodium-iodide symporter by binding to the promoter regions. In Wolffian and Mullerian duct derived tissues, PAX8 is important for mesenchymal-to-epithelial transition and regulates branching morphogenesis and nephron differentiation. PAX8 may also modulate WT1 transcription. Inherited PAX gene deficiencies can result in congenital hypothyroidism and in genitourinary development defects (Congenital Anomalies of the Kidney and Urinary Tract; CAKUT). In normal tissues, PAX8 immunostaining preferably occurs in epithelial cells of the kidney, endometrium, endocervix, fallopian tube, and in follicular cells of the thyroid. Among cancers, PAX8 expression is most commonly seen in carcinomas derived from the thyroid, kidney, ovary, and the endometrium.

Potential Research Applications

- The role of PAX8 in tumor biology – especially for epithelial mesenchymal transition - is under investigation.
- The utility of PAX8 as a therapeutic target is being studied.
- A possible role of PAX8 as an inducer of angiogenesis is being considered.

Protocol Suggestions

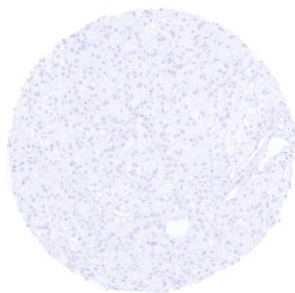
Dilution: 1:150. pH 7,8 is optimal. Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

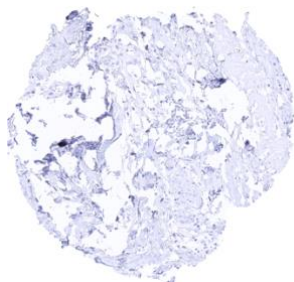
This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

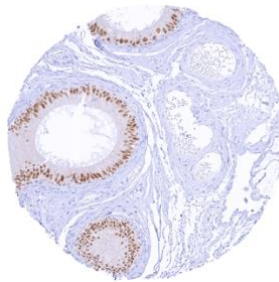
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



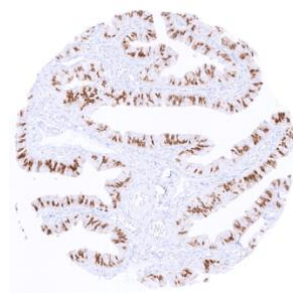
Adrenal gland – Complete lack of PAX8 staining



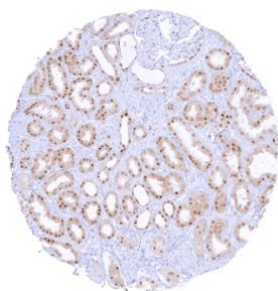
Breast



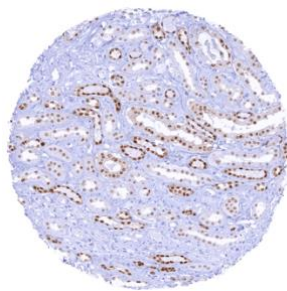
Epididymis – Strong nuclear PAX8 staining of epithelial cells in the cauda epididymis



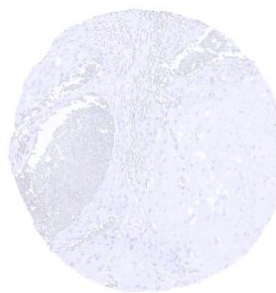
Fallopian tube, mucosa – Strong PAX8 staining of a subset of epithelial cells of the fallopian tube



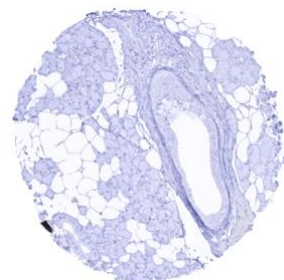
Kidney, cortex – Variable, weak to strong nuclear PAX8 staining of cells of proximal and distal tubuli as well as of parietal epithelial cells of the Bowman's capsule



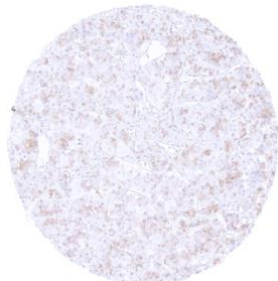
Kidney, medulla – Variable, weak to strong nuclear PAX8 staining of epithelial cells of the collecting ducts



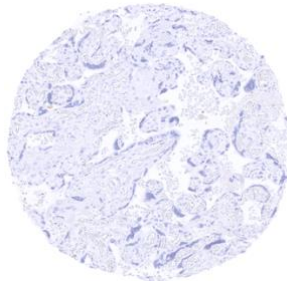
Ovary, corpus luteum



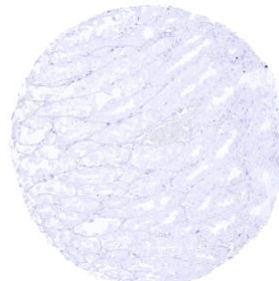
Parotid gland



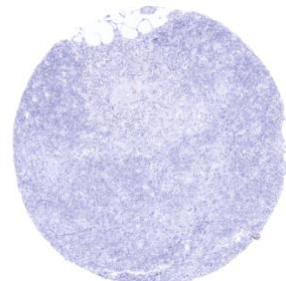
Pituitary gland, anterior lobe – A weak to moderate (non-specific) and purely cytoplasmic PAX8 staining can occur in a fraction of epithelial cells



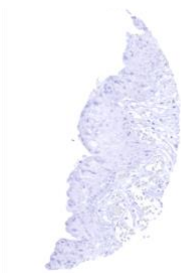
Placenta, mature



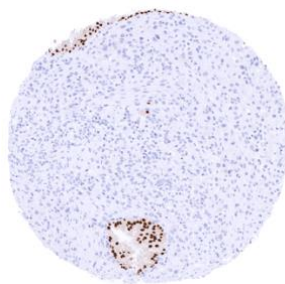
Stomach, corpus



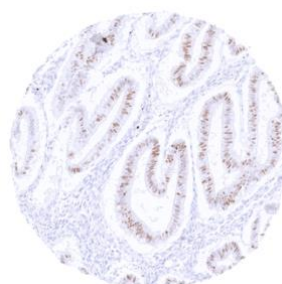
Thymus



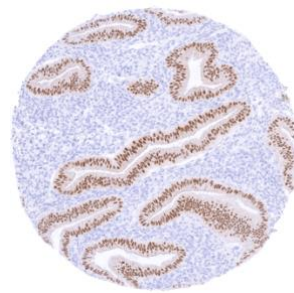
Urinary bladder, urothelium – PAX8 staining is usually lacking in urothelium of the bladder



Uterus, endometrium (pregnancy) – Strong PAX8 staining of endometrium cells while stroma and decidua cells remain negative



Uterus, endometrium (secretion) – Weak to moderate PAX8 staining of most endometrium cells



Uterus, endometrium (secretion) – Strong nuclear PAX8 staining of all endometrium cells