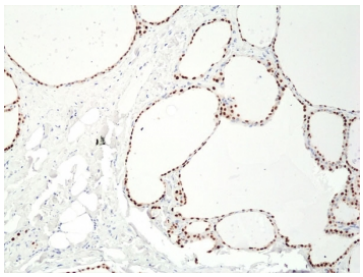
PAX8 Antibody / Epithelial Lineage Transcription Factor Antibody [clone RM436] (R20451)

Catalog No.	Formulation	Size
R20451-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

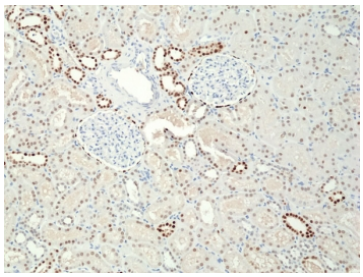
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM436
Purity	Protein A purified from animal origin-free supernatant
UniProt	Q06710
Localization	Nuclear
Applications	Immunohistochemistry (FFPE): 1:100 -1:400
Limitations	This PAX8 antibody is available for research use only.



PAX8 Antibody / Epithelial Lineage Transcription Factor Antibody immunohistochemistry in human thyroid tissue showing strong nuclear HRP-DAB brown staining in follicular epithelial cells. Paired box protein Pax-8 (PAX8) expression is localized to nuclei lining well-defined thyroid follicles, with clear staining of epithelial cells surrounding colloid-filled lumina and minimal signal in stromal or interstitial compartments. The nuclear staining pattern highlights transcriptionally active epithelial cells and supports the role of PAX8 as a lineage-defining transcription factor regulating epithelial identity. Negative cells retain hematoxylin-only nuclear staining, providing clear contrast for interpretation within preserved tissue architecture.



PAX8 Antibody / Epithelial Lineage Transcription Factor Antibody immunohistochemistry in human kidney tissue showing nuclear HRP-DAB brown staining in renal tubular epithelial cells. Paired box protein Pax-8 (PAX8) expression is localized to nuclei lining nephron tubules, with clear staining of epithelial cells forming tubular structures while glomerular and stromal components show minimal to no nuclear signal. The staining pattern highlights transcriptionally active epithelial populations and supports the role of PAX8 as a lineage-defining transcription factor regulating epithelial identity within renal tissue architecture.

Description

Paired box protein Pax-8 (PAX8) is a nuclear transcription factor encoded by the PAX8 gene and a member of the paired box (PAX) family, functioning as a key regulator of epithelial lineage identity in thyroid, renal, and Mullerian-derived tissues. It controls transcriptional programs that define cellular differentiation, maintain tissue-specific phenotypes, and support long-term epithelial stability. PAX8 Antibody is widely used to study transcription factor-driven regulation of epithelial biology at the molecular level.

PAX8 antibody, also known as Paired box protein Pax-8 antibody or Pax-8 transcription factor antibody, is uniquely positioned for investigations into transcriptional control of lineage identity. This PAX8 Antibody is uniquely positioned for studies examining how transcription factors coordinate gene expression networks that establish and maintain epithelial phenotypes. Nuclear localization reflects direct engagement with DNA and transcriptional machinery, providing a clear readout of transcriptional activity within cells.

Functionally, PAX8 binds DNA through its conserved paired box domain, regulating target genes involved in differentiation, proliferation, and cellular organization. It interacts with co-regulators and additional transcription factors to orchestrate complex gene expression programs that define epithelial cell identity. These interactions are essential for maintaining functional tissue architecture across multiple organ systems.

PAX8 plays a central role in preserving epithelial differentiation by sustaining lineage-specific transcriptional programs. In normal tissues, this ensures stability of cellular identity and function. In disease contexts, retention of PAX8 expression reflects preservation of lineage characteristics, even in transformed cells, highlighting its role as a marker of differentiation rather than a driver of transformation.

At the cellular level, nuclear PAX8 expression provides a direct indication of transcriptionally active epithelial cells. This allows researchers to identify and study specific cell populations within heterogeneous tissues, particularly when combined with other markers or functional assays. The ability to visualize transcription factor localization at the single-cell level enhances understanding of lineage dynamics and cellular organization.

PAX8 Antibody therefore provides a powerful tool for studying epithelial lineage regulation and transcription factor biology. Its strong nuclear staining pattern, combined with its central role in gene regulation, supports investigations into differentiation, development, and maintenance of epithelial identity. This makes it highly valuable for research focused on transcriptional control mechanisms and lineage-specific biology across multiple tissue types.

Application Notes

The stated application concentrations are suggested starting points. Titration of the PAX8 Antibody / Epithelial Lineage Transcription Factor Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A peptide corresponding to the C-terminus of PAX8 was used as the immunogen for the PAX8 Antibody / Epithelial Lineage Transcription Factor Antibody.

Storage

Store the recombinant PAX8 antibody at -20oC.

Alternate Names

PAX8 epithelial transcription factor antibody, Paired box protein Pax-8 lineage regulator antibody, PAX8 nuclear transcription factor antibody, Pax-8 epithelial identity antibody, PAX8 differentiation regulator antibody

Copyright © NSJ Bioreagents. All rights reserved.