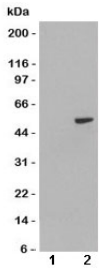
PAX8 Antibody / Developmental Biology Marker Antibody (R33158)

Catalog No.	Formulation	Size
R33158-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	7849
Localization	Nuclear, cytoplasmic
Applications	Western Blot : 1-3ug/ml ELISA (peptide) LOD : 1:32000
Limitations	This PAX8 antibody is available for research use only.



PAX8 Antibody / Developmental Biology Marker Antibody western blot analysis in human samples. Lane 1: mock-transfected HEK293 lysate, Lane 2: HEK293 lysate overexpressing human PAX8A. A band is detected at approximately 55-60 kDa in the overexpression sample, above the predicted molecular weight of Paired box protein Pax-8 (PAX8) at ~48 kDa. The upward shift in apparent molecular weight is consistent with post-translational modification or altered electrophoretic mobility commonly observed for nuclear transcription factors. No corresponding band is present in the mock control, supporting specific detection of PAX8.

Description

Paired box protein Pax-8 (PAX8) is a nuclear transcription factor encoded by the PAX8 gene that plays a fundamental role in embryonic development and organogenesis of thyroid, renal, and Mullerian-derived tissues. As a member of the paired box (PAX) family, PAX8 regulates transcriptional programs that guide early epithelial lineage specification and tissue morphogenesis. PAX8 Antibody is uniquely positioned for developmental biology applications where identification

of lineage-defining transcription factors during organ formation is required.

PAX8 antibody, also known as Paired box protein Pax-8 antibody or Pax-8 transcription factor antibody, is highly active during embryogenesis and early differentiation. This PAX8 Antibody is uniquely positioned for detecting nuclear PAX8 expression in progenitor and differentiating epithelial populations, enabling researchers to trace lineage commitment and early tissue specification events. Unlike general lineage pages, this application emphasizes developmental timing and progenitor cell biology, not just mature tissue identity.

Functionally, PAX8 regulates gene expression programs that initiate and stabilize organ-specific differentiation pathways. In thyroid development, it controls formation of follicular epithelial cells, while in kidney development it contributes to nephron patterning and epithelialization. In Mullerian duct formation, PAX8 supports development of reproductive tract epithelia. These roles place PAX8 at an early checkpoint in lineage commitment rather than only in terminal differentiation.

Disruption of PAX8 expression during development leads to defects in organ formation, highlighting its role as a driver of early epithelial specification. Its continued expression into adulthood reflects persistence of developmental transcriptional programs established during embryogenesis.

At the cellular level, nuclear PAX8 staining identifies cells actively undergoing lineage commitment or maintaining developmental transcriptional programs. This enables mapping of developmental pathways and identification of progenitor populations within complex tissues.

PAX8 Antibody therefore provides a specialized tool for studying embryonic development and lineage specification, with emphasis on early differentiation events and organogenesis rather than mature tissue identification. This makes it particularly valuable for developmental biology, stem cell differentiation studies, and investigations of lineage commitment pathways.

Application Notes

Optimal dilution of the PAX8 Antibody / Developmental Biology Marker Antibody should be determined by the researcher.

Immunogen

Amino acids AQPGSDKRKMDD were used as the immunogen for this PAX8 Antibody / Developmental Biology Marker Antibody.

Storage

Aliquot and store the PAX8 antibody at -20oC.

Alternate Names

PAX8 developmental marker antibody, Paired box protein Pax-8 embryogenesis antibody, PAX8 organogenesis marker antibody, Pax-8 developmental transcription factor antibody, PAX8 embryonic lineage antibody