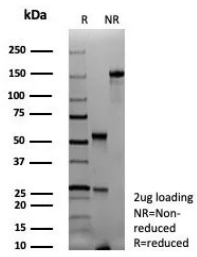
PAX6 Antibody Recombinant Mouse MAb rPAX6/9324 [clone rPAX6/9324] (V5526)

Catalog No.	Formulation	Size
V5526-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5526-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5526SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Recombinant | MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2b, kappa
Clone Name	rPAX6/9324
Purity	Protein A/G affinity
UniProt	P26367
Localization	Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This PAX6 antibody is available for research use only.



PAX6 Antibody Recombinant Mouse MAb rPAX6/9324 SDS-PAGE analysis of antibody integrity and purity. Purified BSA-free antibody was analyzed under reducing (R) and non-reducing (NR) conditions with 2 ug protein loading. The gel demonstrates the expected antibody heavy and light chain bands under reducing conditions and intact antibody under non-reducing conditions, confirming purity and structural integrity of the recombinant mouse monoclonal antibody.

Description

Paired box protein Pax-6 (PAX6) is a nuclear transcription factor encoded by the PAX6 gene and is widely recognized as

a master regulator of eye formation and neural development. The protein belongs to the paired box family of transcription factors and controls expression of numerous genes involved in embryonic patterning and cellular differentiation. PAX6 Antibody Recombinant Mouse MAb rPAX6/9324 is designed to detect Pax-6 protein and supports research investigating transcriptional regulation during development and cellular differentiation.

PAX6 is highly conserved across species and is essential for proper formation of ocular structures including the retina, lens, cornea, and iris. During embryogenesis the transcription factor regulates gene networks that guide morphogenesis of the developing eye and central nervous system. Pax-6 is also expressed in neural progenitor cells within the developing brain, where it contributes to neuronal lineage specification and regional patterning of the cerebral cortex.

The PAX6 protein contains several functional domains that enable precise control of gene expression. An N-terminal paired DNA-binding domain allows sequence-specific recognition of regulatory DNA elements, while a homeodomain provides additional DNA-binding capacity. The C-terminal region functions as a transcriptional activation domain that interacts with transcriptional co-regulators and chromatin-modifying complexes. Through these domains Pax-6 coordinates complex transcriptional programs required for tissue development and cellular differentiation.

Alterations in PAX6 expression or gene mutations can lead to developmental disorders affecting the eye and nervous system. Mutations in the PAX6 gene are associated with aniridia and other congenital ocular abnormalities characterized by defects in iris formation and visual system development. Because of its central role in developmental gene regulation, PAX6 has been extensively studied as a key transcription factor governing organogenesis and neural differentiation.

PAX6 antibody reagents are commonly described using several related protein names including PAX6 antibody, Pax-6 antibody, paired box protein Pax-6 antibody, and aniridia type II protein antibody. These terms all refer to the transcription factor encoded by the PAX6 gene. The recombinant monoclonal antibody rPAX6/9324 recognizes Pax-6 and supports research focused on developmental biology, neural differentiation, and transcriptional regulation of gene expression.

Application Notes

Optimal dilution of the PAX6 Antibody Recombinant Mouse MAb rPAX6/9324 should be determined by the researcher.

Immunogen

A recombinant fragment (amino acids 1-300) of human PAX6 protein was used as the immunogen for the recombinant PAX6 antibody.

Storage

Aliquot the PAX6 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

PAX6 antibody, Pax-6 antibody, paired box protein Pax-6 antibody, aniridia type II protein antibody