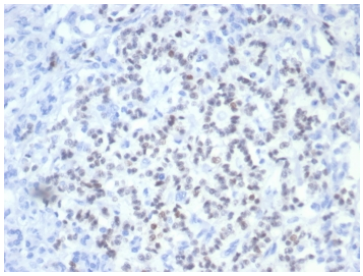
PAX6 Antibody for Immunohistochemistry / Paired Box Protein Pax-6 Antibody [clone PAX6/7708] (V4133)

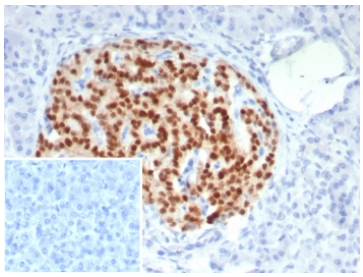
Catalog No.	Formulation	Size
V4133-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4133-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4133SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

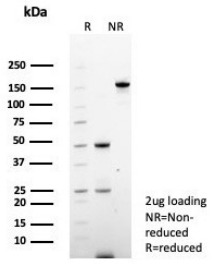
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG
Clone Name	PAX6/7708
Purity	Protein A/G affinity
UniProt	P26367
Localization	Nucleus
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This PAX6 antibody is available for research use only.



PAX6 Antibody for Immunohistochemistry analysis of human pancreatic cancer tissue. Formalin-fixed paraffin-embedded human pancreatic carcinoma stained with PAX6 Antibody for Immunohistochemistry (clone PAX6/7708). HRP-DAB brown chromogenic staining highlights nuclei of tumor cells, consistent with the expected nuclear localization of Paired Box Protein Pax-6 / PAX6. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes and allow to cool before testing.



PAX6 Antibody for Immunohistochemistry staining of human pancreas tissue. Formalin-fixed paraffin-embedded human pancreas stained with PAX6 Antibody for Immunohistochemistry (clone PAX6/7708). HRP-DAB brown chromogenic staining highlights nuclei of pancreatic islet cells, consistent with the nuclear localization of Paired Box Protein Pax-6 / PAX6 in endocrine pancreatic cells. Inset: PBS used in place of the primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free PAX6 antibody (clone PAX6/7708) as confirmation of integrity and purity.

Description

Paired box protein Pax-6 (PAX6) is a nuclear transcription factor encoded by the PAX6 gene and functions as a master regulator of eye development, neural differentiation, and endocrine lineage specification. The protein belongs to the paired box family of transcription factors and controls gene expression programs involved in tissue patterning and organogenesis. PAX6 Antibody for Immunohistochemistry / Paired Box Protein Pax-6 Antibody is designed for immunohistochemistry applications, enabling visualization of Pax-6 expressing cells in formalin-fixed paraffin-embedded tissue sections.

Immunohistochemistry is widely used to detect nuclear transcription factors such as PAX6 because the protein displays strong nuclear localization that produces well-defined staining patterns in tissue sections. PAX6 Antibody for Immunohistochemistry allows researchers to identify Pax-6 positive cells within histological samples and evaluate the distribution of transcriptionally active cell populations. Nuclear staining observed by immunohistochemistry provides a clear marker for cells in which Pax-6 regulated gene expression programs are active.

PAX6 plays a critical role in embryonic development of the eye and central nervous system. During ocular development, Pax-6 regulates transcription of genes required for formation of the retina, lens, cornea, and iris. In the developing brain, PAX6 is expressed in neural progenitor cells and contributes to regional patterning and neuronal lineage specification. Because of its role in neurogenesis and organogenesis, immunohistochemical detection of PAX6 is frequently used in studies of developmental biology and tissue differentiation.

PAX6 is also a well-established marker of pancreatic endocrine cells. Immunohistochemistry commonly demonstrates strong nuclear PAX6 staining in cells within pancreatic islets, reflecting the transcription factor's involvement in endocrine cell differentiation and regulation of hormone-producing cell populations. Visualization of Pax-6 positive nuclei in tissue sections can therefore assist researchers in identifying endocrine cell populations and studying pancreatic development.

The PAX6 protein contains multiple structural domains that mediate transcriptional regulation, including an N-terminal paired DNA-binding domain, a homeodomain, and a C-terminal proline-serine-threonine rich transactivation region. Through these domains Pax-6 binds regulatory DNA sequences and controls transcription of genes involved in developmental signaling pathways. PAX6 antibody reagents are commonly referenced in the literature using several related names including PAX6 antibody, Pax-6 antibody, paired box protein Pax-6 antibody, and aniridia type II protein antibody. PAX6 Antibody for Immunohistochemistry / Paired Box Protein Pax-6 Antibody therefore supports studies examining nuclear transcription factor expression and cellular differentiation in tissue samples.

Application Notes

Optimal dilution of the PAX6 Antibody for Immunohistochemistry should be determined by the researcher.

Immunogen

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

Storage

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

Alternate Names

Pax-6 antibody, paired box protein Pax-6 antibody, aniridia type II protein antibody, Pax6 transcription factor antibody

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