PAX6 Antibody for IHC / Paired Box Protein Pax-6 Antibody [clone MSVA-706M] (V6102)

Catalog No.	Formulation	Size
V6102-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6102-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant | MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	MSVA-706M
UniProt	P26367
Localization	Nucleus
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This PAX6 Antibody for IHC is available for research use only.

PAX6 Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Paired box protein Pax-6 / PAX6 in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using mouse monoclonal antibody clone MSVA-706M. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates nuclear localization, with strongest staining observed in pancreatic endocrine cells within islets, while most other tissues show low to absent signal. Within tumor tissue microarrays, nuclear positivity may be detected in tumors with neuroendocrine or developmental lineage features. Evaluation across large TMA panels enables direct comparison of PAX6 expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported expression profiles in the Human Protein Atlas and support its use as a marker of pancreatic endocrine and developmental transcriptional regulation.

Description

Paired box protein Pax-6 (PAX6) is a nuclear transcription factor encoded by the PAX6 gene and functions as a key regulator of eye formation, neurogenesis, and endocrine differentiation. The protein belongs to the paired box family of

transcription factors and controls transcriptional programs that regulate tissue patterning and cellular lineage specification. PAX6 Antibody for IHC (clone MSVA-706M) is optimized for immunohistochemistry applications, enabling visualization of Pax-6 expressing cells in formalin-fixed paraffin-embedded tissues and supporting studies focused on developmental biology, endocrine cell identification, and tumor pathology.

Immunohistochemistry is widely used to detect nuclear transcription factors such as PAX6 in tissue sections. Pax-6 displays characteristic nuclear localization, making it well suited for immunohistochemical analysis where positive staining appears as distinct nuclear chromogenic signal within specific cell populations. PAX6 Antibody for IHC therefore enables clear visualization of Pax-6 expressing cells in histological samples and supports identification of cell types in which the transcription factor is active.

PAX6 plays a central role in development of ocular tissues including the retina, lens, and cornea, and it is also expressed in neural progenitor cells within the developing brain. In addition to its developmental roles, Pax-6 is a well established marker of pancreatic endocrine cells. Immunohistochemistry studies commonly demonstrate strong nuclear PAX6 staining in pancreatic islets, reflecting the transcription factorÃ¢Â€Â™s role in endocrine lineage differentiation and hormone-producing cell function.

The PAX6 protein contains several functional domains that mediate DNA binding and transcriptional regulation. These include an N-terminal paired domain, a homeodomain, and a C-terminal transactivation region. Through these domains Pax-6 regulates transcription of genes required for organ development and cell fate determination. Immunohistochemical detection of PAX6 therefore provides valuable information regarding the distribution of transcriptionally active endocrine and neural cell populations within tissues.

PAX6 antibody reagents are widely 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. These terms refer to the same transcription factor encoded by the PAX6 gene. PAX6 Antibody for IHC (clone MSVA-706M) enables immunohistochemical detection of Pax-6 in tissue sections and supports studies examining endocrine cell biology, developmental pathways, and tumor classification.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

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

2. This PAX6/Paired box protein Pax-6 antibody is recombinantly produced by expression in CHO cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

A recombinant fragment (N-terminus; aa 1-300) of human PAX6 protein was used as the immunogen for the PAX6 Antibody for IHC.

Storage

PAX6/Paired box protein Pax-6 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

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