

PAX6 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1419a**Specification**

PAX6 Antibody - Product Information

Application	WB, FC, E
Primary Accession	P26367
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	46kDa KDa

Description

Transcription factor with important functions in the development of the eye, nose, central nervous system and pancreas. Required for the differentiation of pancreatic islet alpha cells .PAX6 is the most researched of the PAX genes and appears throughout the literature as a "master control" gene for the development of eyes and other sensory organs, certain neural and epidermal tissues as well as other homologous structures, usually derived from ectodermal tissues. This transcription factor is most famous for its use in the interspecifically induced expression of ectopic eyes and is of medical importance because heterozygous mutants produce a wide spectrum of ocular defects such as Aniridia in humans. This gene encodes paired box gene 6, one of many human homologues of the Drosophila melanogaster gene *prd*. In addition to the hallmark feature of this gene family, a conserved paired box domain, the encoded protein also contains a homeo box domain. Both domains are known to bind DNA, and function as regulators of gene transcription. This gene is expressed in the developing nervous system, and in developing eyes. Mutations in this gene are known to cause aniridia as well as Peter's anomaly, both ocular diseases.

Immunogen

Purified recombinant fragment of human PAX6 expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

PAX6 Antibody - Additional Information

Gene ID 5080

Other Names

Paired box protein Pax-6, Aniridia type II protein, Oculorhombin, PAX6, AN2

Dilution

WB~~1/500 - 1/2000

FC~~1/200 - 1/400

E~~N/A

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

PAX6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

PAX6 Antibody - Protein Information

Name PAX6

Synonyms AN2

Function

Transcription factor with important functions in the development of the eye, nose, central nervous system and pancreas. Required for the differentiation of pancreatic islet alpha cells (By similarity). Competes with PAX4 in binding to a common element in the glucagon, insulin and somatostatin promoters. Regulates specification of the ventral neuron subtypes by establishing the correct progenitor domains (By similarity). Acts as a transcriptional repressor of NFATC1- mediated gene expression (By similarity).

Cellular Location

Nucleus {ECO:0000250|UniProtKB:P63015}. [Isoform 5a]: Nucleus {ECO:0000250|UniProtKB:P63016}

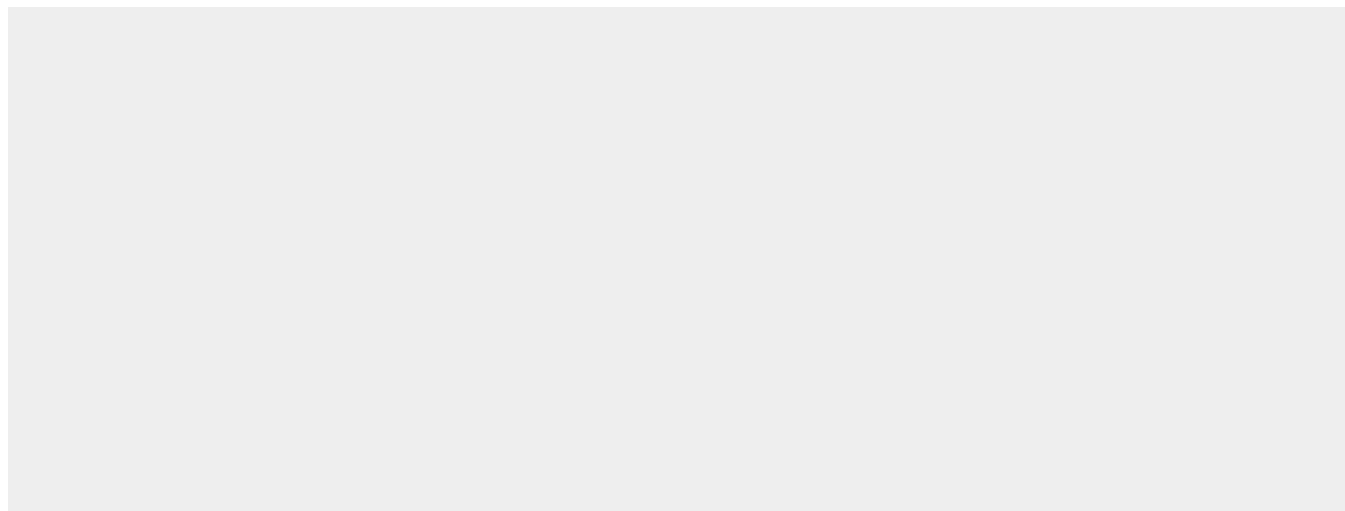
Tissue Location

[Isoform 1]: Expressed in lymphoblasts.

PAX6 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PAX6 Antibody - Images

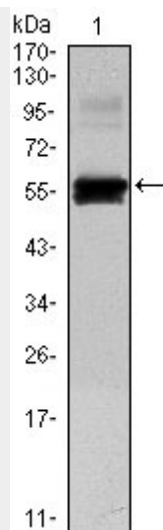


Figure 1: Western blot analysis using PAX6 mAb against human PAX6 (AA: 1-223) recombinant protein. (Expected MW is 50 kDa)

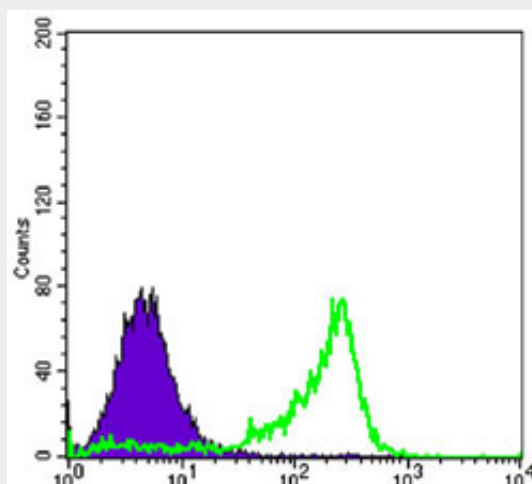


Figure 3: Flow cytometric analysis of 3T3-L1 cells using PAX6 mouse mAb (green) and negative control (purple).

PAX6 Antibody - References

1. Invest Ophthalmol Vis Sci. 2009 Jun;50(6):2581-90.
2. J Biol Chem. 2009 Oct 2;284(40):27524-32.
3. J Biol Chem. 2010 Jan 22;285(4):2527-36.