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PAX6 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1419a

Product Information

Application	WB, FC, E
Primary Accession	P26367
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1C8
Isotype	IgG1
Calculated MW	46683
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.

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.

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.

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.

Images

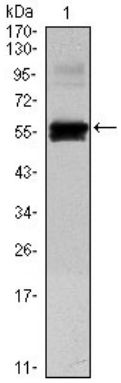

Figure 1: Western blot analysis using PAX6 mAb against human PAX6 (AA: 1-223) recombinant protein. (Expected MW is 50 kDa)

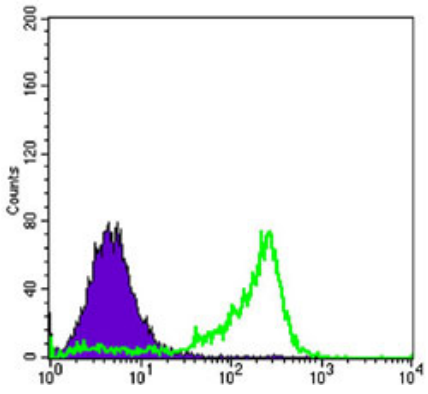

Figure 3: Flow cytometric analysis of 3T3-L1 cells using PAX6 mouse mAb (green) and negative control (purple).