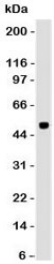
PAX6 Antibody for WB / Paired Box Protein Pax-6 Antibody [clone PBPX6] (V7079)

Catalog No.	Formulation	Size
V7079-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7079-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7079SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	PBPX6
Purity	Protein G purified antibody
Gene ID	5080
Localization	Nuclear
Applications	Western Blot : 1-2ug/ml
Limitations	This PAX6 antibody is available for research use only.



PAX6 Antibody for WB western blot analysis of human cerebellum lysate. A band is detected at approximately 48 kDa, consistent with the predicted molecular weight of Paired Box Protein Pax-6 / PAX6. Clone PBPX6 was used as the detecting antibody, demonstrating specific detection of this nuclear transcription factor in SDS-PAGE immunoblot analysis.

Description

Paired box protein Pax-6 (PAX6) is a transcription factor encoded by the PAX6 gene and plays a central role in embryonic

development of the eye, brain, and central nervous system. The protein belongs to the paired box family of transcription factors and contains both a paired DNA-binding domain and a homeodomain that enable sequence-specific regulation of gene expression. PAX6 Antibody for WB / Paired Box Protein Pax-6 Antibody (clone PBPX6) supports western blot detection of PAX6 protein, allowing researchers to evaluate expression of this key developmental transcription factor in cell and tissue lysates.

Western blotting is widely used to analyze PAX6 protein expression in developmental biology and neuroscience studies. Because PAX6 is a nuclear transcription factor expressed in neural progenitors and developing ocular tissues, immunoblot detection provides a reliable method for confirming protein expression and comparing levels across experimental models. PAX6 Antibody for WB enables identification of Pax-6 protein bands following SDS-PAGE separation, supporting studies examining transcription factor regulation during cellular differentiation and tissue development.

PAX6 plays a crucial role in ocular morphogenesis and neural patterning. During embryogenesis, Pax-6 regulates transcriptional programs that control formation of the retina, lens, cornea, and other eye structures. In addition to its role in eye development, PAX6 contributes to specification of neuronal cell types in the developing brain and olfactory system. Loss-of-function mutations in the PAX6 gene are associated with developmental disorders such as aniridia and other congenital eye malformations, highlighting the importance of this transcription factor in tissue patterning.

Structurally, the PAX6 protein contains a paired DNA-binding domain at the N-terminus, a homeodomain responsible for additional DNA recognition, and a proline-serine-threonine rich transactivation domain that regulates transcriptional activity. These domains enable Pax-6 to bind regulatory DNA sequences and control expression of genes involved in developmental signaling pathways. Western blot analysis using PAX6 Antibody for WB allows researchers to examine expression of this transcription factor and investigate how developmental signaling pathways influence PAX6 protein levels.

PAX6 antibody reagents are frequently 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 names all refer to the same transcription factor encoded by the PAX6 gene. Clone PBPX6 is designed to detect PAX6 protein in lysates prepared for SDS-PAGE analysis. PAX6 Antibody for WB / Paired Box Protein Pax-6 Antibody therefore supports immunoblot studies examining transcriptional regulation, neural differentiation, and developmental biology pathways.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the antibody to be titered up or down for optimal performance.

Immunogen

A partial human PAX6 protein was used as the immunogen for PAX6 Antibody for WB.

Storage

Store the PAX6 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

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