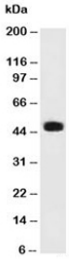
Paired Box Protein Pax-6 Antibody for Western Blotting / PAX6 Antibody [clone PAX6/498] (V2216)

Catalog No.	Formulation	Size
V2216-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2216-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2216SAF-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	PAX6/498
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.



Paired Box Protein Pax-6 Antibody for Western Blotting 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 PAX6/498 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 nuclear transcription factor encoded by the PAX6 gene and is widely recognized as

a master regulator of eye and neural development. The protein belongs to the paired box family of transcription factors and contains multiple DNA-binding domains that control expression of genes involved in tissue patterning and cellular differentiation. Paired Box Protein Pax-6 Antibody for Western Blotting / PAX6 Antibody (clone PAX6/498) is designed to support immunoblot analysis of PAX6 protein in cell and tissue lysates, enabling researchers to examine expression of this important developmental regulator.

Western blotting provides a reliable approach for detecting PAX6 protein following SDS-PAGE separation of cellular proteins. Because Pax-6 functions as a nuclear transcription factor, immunoblot analysis allows researchers to confirm protein expression levels and compare PAX6 abundance across different biological samples. Paired Box Protein Pax-6 Antibody for Western Blotting is therefore useful for studies examining transcription factor expression in neural tissues, developmental models, and cultured cells undergoing differentiation.

PAX6 plays a fundamental role during embryogenesis, particularly in formation of the eye, central nervous system, and olfactory structures. The transcription factor regulates gene networks that control development of the retina, lens, and corneal epithelium. In the developing brain, PAX6 contributes to regional specification and neuronal lineage determination. Because of its critical developmental functions, PAX6 expression is frequently investigated using western blotting to confirm transcription factor production in neural progenitors and brain tissues.

The PAX6 protein contains several structural regions that enable DNA binding and transcriptional regulation. These include an N-terminal paired domain responsible for sequence-specific DNA recognition, a homeodomain that provides additional DNA-binding capability, and a C-terminal transactivation domain rich in proline, serine, and threonine residues. Through these domains Pax-6 regulates transcription of numerous developmental genes. Western blot analysis using PAX6 antibody reagents provides a convenient method for monitoring expression of this transcription factor during studies of cell differentiation and developmental signaling pathways.

PAX6 antibody reagents are commonly described 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 transcription factor encoded by the PAX6 gene. Clone PAX6/498 is designed to detect PAX6 protein in lysates prepared for SDS-PAGE immunoblot analysis. Paired Box Protein Pax-6 Antibody for Western Blotting / PAX6 Antibody therefore supports immunoblot studies examining developmental transcription factors, neural differentiation, and gene regulatory mechanisms.

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

Recombinant human PAX6 protein was used as the immunogen for this Paired Box Protein Pax-6 Antibody for Western Blotting.

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