

Product Name: KD-Validated Paired box 6 Recombinant Rabbit Monoclonal Antibody
Catalog #: KVAAb01498

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC
Reactivity	Human
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000
Molecular Weight	Calculated MW: 46.7kDa

Antigen Information

Gene Name	PAX6
Alternative Names	Paired Box 6; D11S812E; WAGR; AN2; AN; Paired Box Protein Pax-6; Aniridia Type II Protein; Oculorhombin; Aniridia 1; Aniridia 2; AN1; Paired Box Gene 6 (Aniridia, Keratitis); Paired Box 6 PAX6A-ASdel6-AS7 Isoform; Paired Box 6 PAX6A-ASdel6 Isoform; Paired Box 6 PAX6B-ASdel6 Isoform; Paired Box 6 PAX6A-Del6 Isoform; Paired Box 6 PAX6-12a Isoform; Paired Box 6 PAX6D Isoform; Paired Box Homeotic Gene-6; Alternative Protein PAX6; Aniridia, Keratitis; ASGD5; FVH1; MGDA;
Gene ID	5080.0
SwissProt ID	P26367
Immunogen	A synthesized peptide derived from human PAX6

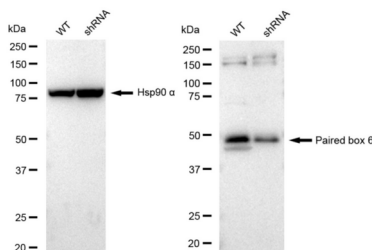
Background

This gene encodes paired box protein Pax-6, one of many human homologs of the *Drosophila melanogaster* gene *prd*. In addition to a conserved paired box domain, a hallmark feature of this gene family, the encoded protein also contains a homeobox domain. Both domains are known to bind DNA and function as regulators of gene transcription. Activity of this protein is key in the development of neural tissues, particularly the eye. This gene is regulated by multiple enhancers located up to hundreds of kilobases distant from this locus. Mutations in this gene or in the enhancer regions can cause ocular disorders such as aniridia and Peter's anomaly. Use of alternate promoters and alternative splicing results in multiple transcript variants encoding different isoforms. Interestingly, inclusion of a particular alternate coding exon has been shown to increase the length of the paired box domain and alter its DNA binding specificity. Consequently, isoforms that carry the shorter paired box domain regulate a different set of genes compared to the isoforms carrying the longer paired box domain. [provided by RefSeq, Mar 2019]

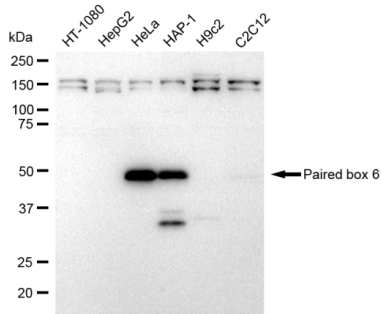
Research Area

Neuroscience, Epigenetics and Nuclear Signaling, Stem Cells, Developmental Biology

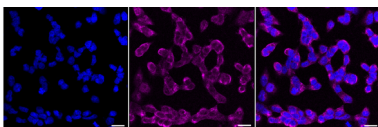
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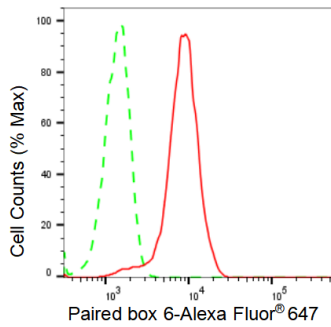
Western blotting analysis using Paired box 6 antibody (KVA01498). Paired box 6 expression in wild type (WT) and paired box 6 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with Paired box 6 antibody (KVA01498, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Western blotting analysis using Paired box 6 antibody (KVA01498). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with Paired box 6 antibody (KVA01498, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



Immunocytochemical staining of HeLa cells with Paired box 6 antibody (KVA01498, 1:1,000). Nuclei were stained blue with DAPI; Paired box 6 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.



Flow cytometric analysis of Paired box 6 expression in HeLa cells using Paired box 6 antibody (KVA01498, 1:2,000). Green, isotype control; red, Paired box 6.