

Human PAX6 Knockdown Cell Lysate

Cat. No. PAX6-262HKCL Lot. No. (See product label)

SPECIFICATION

Product Overview WB-validated PAX6 Knockdown HeLa Cell Lysate

Species Human

Source HeLa

Description

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.

Form Cell-Tissue Lysis buffer

Molecular Mass 47 kDa

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Notes	Instruction of use: This knockdown cell lysate should be paired with wild-type HeLa cell lysate for use. For Western blotting, we recommend running wild-type and knockdown lysates on the same gel, and loading each well with equal volume and equal amount of total proteins.
Storage	Store at -20 centigrade for two years.
Concentration	Lot-specific
Shipping	Blue Ice
Components	1 vial of 100 µg WT HeLa cell lysate 1 vial of 100 µg PAX6 KD HeLa cell lysate
Protein Families	Adult stem cells, Druggable Genome, Embryonic stem cells, Transcription Factors
Protein Pathways	Maturity onset diabetes of the young
Lysate QC	RT-qPCR; Western Blotting (WB)

GENE INFORMATION

Gene Name	PAX6 paired box 6 [Homo sapiens (human)]
Official Symbol	PAX6
Synonyms	PAX6; paired box 6; AN2, paired box gene 6 (aniridia, keratitis); paired box protein Pax-6; AN; aniridia; keratitis; D11S812E; WAGR; oculorhombin; aniridia type II protein; paired box homeotic gene-6; AN2; MGDA; MGC17209;
Gene ID	5080

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mRNA Refseq	NM_000280
Protein Refseq	NP_000271
MIM	607108
UniProt ID	P26367

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