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Product datasheet for RC222644L2V

PAX6 (NM_001604) Human Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	PAX6 (NM_001604) Human Tagged ORF Clone Lentiviral Particle
Symbol:	PAX6
Synonyms:	AN; AN1; AN2; ASGD5; D11S812E; FVH1; MGDA; WAGR
Mammalian Cell Selection:	None
Vector:	pLenti-C-mGFP (PS100071)
Tag:	mGFP
ACCN:	NM_001604
ORF Size:	1308 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RC222644).
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	NM_001604.3
RefSeq Size:	2781 bp
RefSeq ORF:	1311 bp
Locus ID:	5080
UniProt ID:	P26367
Cytogenetics:	11p13
Domains:	homeobox, PAX
Protein Families:	Adult stem cells, Druggable Genome, Embryonic stem cells, Transcription Factors

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Protein Pathways: Maturity onset diabetes of the young

MW: 48 kDa

Gene Summary: 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]