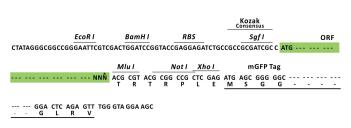


# Product datasheet for RC225676L4

# PAX6 (NM\_001127612) Human Tagged Lenti ORF Clone

## **Product data:**

#### **Product Type: Expression Plasmids Product Name:** PAX6 (NM\_001127612) Human Tagged Lenti ORF Clone Tag: mGFP Symbol: PAX6 Synonyms: AN; AN1; AN2; ASGD5; D11S812E; FVH1; MGDA; WAGR **Mammalian Cell** Puromycin Selection: Vector: pLenti-C-mGFP-P2A-Puro (PS100093) E. coli Selection: Chloramphenicol (34 ug/mL) The ORF insert of this clone is exactly the same as(RC225676). **ORF** Nucleotide Sequence: **Restriction Sites:** Sgfl-Mlul **Cloning Scheme:** Cloning sites used for ORF Shuttling: ORF Sqf I Mlu I --- GCG ATC GC C ATG --- //--- NNN ACG CGT ---



\* The last codon before the Stop codon of the ORF.



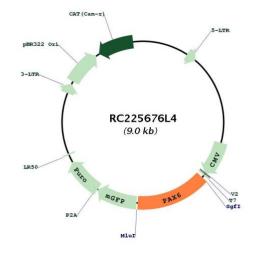
### OriGene Technologies, Inc.

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### Plasmid Map:



ACCN:	NM_001127612
ORF Size:	1266 bp
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. <u>More info</u>
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol> <li>Centrifuge at 5,000xg for 5min.</li> <li>Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>Close the tube and incubate for 10 minutes at room temperature.</li> <li>Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.</li> </ol>
RefSeq:	<u>NM 001127612.1</u>
RefSeq Size:	6883 bp
RefSeq ORF:	1269 bp

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	PAX6 (NM_001127612) Human Tagged Lenti ORF Clone – RC225676L4
Locus ID:	5080
UniProt ID:	<u>P26367</u>
Cytogenetics:	11p13
Protein Families:	Adult stem cells, Druggable Genome, Embryonic stem cells, Transcription Factors
Protein Pathways	: Maturity onset diabetes of the young
MW:	46.7 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]

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