

## Product datasheet for **RC232693**

### **PAX6 (NM\_001258464) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PAX6 (NM_001258464) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PAX6
Synonyms:	AN; AN1; AN2; ASGD5; D11S812E; FVH1; MGDA; WAGR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC232693 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

RCATGCAGAACAGTCACAGCGGAGTGAATCAGCTCGGTGGTGTCTTTGTCAACGGCGGCCACTGCCGGA  
 CTCCACCCGGCAGAAGATTGTAGAGCTAGCTCACAGCGGGGCCGCGTGCACATTTCCGAATTCTG  
 CAGGTGTCCAACGGATGTGTGAGTAAAATTCTGGCAGGTATTACGAGACTGGCTCCATCAGACCCAGGG  
 CAATCGGTGGTAGTAAACCGAGAGTAGCGACTCCAGAAGTTGTAAGCAAAATAGCCAGTATAAGCGGGA  
 GTGCCCGTCCATCTTTGCTTGGGAAATCCGAGACAGATTACTGTCCGAGGGGGTCTGTACCAACGATAAC  
 ATACCAAGCGTGCATCAATAAACAGAGTTCCTCGCAACCTGGCTAGCGAAAAGCAACAGATGGGCGCAG  
 ACGGCATGTATGATAAACTAAGGATGTTGAACGGGCAGACCGGAAGCTGGGGCACCCGCCCTGGTTGGTA  
 TCCGGGGACTTCGGTGCCAGGGCAACCTACGCAAGATGGCTGCCAGCAACAGGAAGGAGGGGGAGAGAAT  
 ACCAACTCCATCAGTTCCAACGGAGAAGATTAGATGAGGCTCAAATGCGACTTCAGCTGAAGCGGAAGC  
 TGCAAAGAAATAGAATCCTTTACCCAAGAGCAAATTGAGGCCCTGGAGAAAGAGTTTGAGAGAACCCA  
 TTATCCAGATGTGTTTGGCCGAGAAAGACTAGCAGCCAAAATAGATCTACTTGAAGCAAGAATACAGGTA  
 TGGTTTTCTAATCGAAGGGCCAAATGGAGAAGAGAAGAAAAACTGAGGAATCAGAGAAGACAGGCCAGCA  
 ACACACCTAGTCATATTCCTATCAGCAGTAGTTTCAGCACCAGTGTCTACCAACCAATCCACAACCCAC  
 CACACCGGTTTCCTCCTTACATCTGGCTCCATGTTGGGCCGAACAGACACAGCCCTCACAACACCTAC  
 AGCGCTCTGCCGCTATGCCAGCTTACCATGGCAAATAACCTGCCTATGCAACCCCAAGTCCCCAGCC  
 AGACCTCTCATACTCTGCATGCTGCCACCAGCCCTTCGGTGAATGGGCGGAGTTATGATACCTACAC  
 CCCCCACATATGCAGACACACATGAACAGTCAGCCAATGGGCACCTCGGGCACCCTTCAACAGGACTC  
 ATTTCCCTGGTGTGTCAGTTCAGTTCAAGTTCGGGAAGTGAACCTGATATGTCTCAATACTGGCCAA  
 GATTACAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC232693 protein sequence  
 Red=Cloning site Green=Tags(s)

XCRTVTAE\*ISSVVSLSTGGHCRTPPGRRL\*S\*LTAGPGRATFPEFCRCPTDV\*VKFWAGITRLAPSDPG  
 QSVVVNRE\*RLQKL\*AK\*PSISGSARPSLLGKSETDYCPRGSVPTITYQACHQ\*TEFFATWLAKSNRWAQ  
 TACMIN\*GC\*TGRPEAGAPALVGIRGLRCQNLKMAASNRKEGERIPTSPVTEKIQMRLKDFS\*SGS  
 CKEIEHPLPKSKLRPWRKSLREPIIQMCLPEKD\*QPK\*IYLKQYRYGFLIEGPNGEKKK\*GIREDRPA  
 THLVIFLSAVVSAPVSTNQFHNPFRFPSSHLAPCWAETQPSQTPTALCRLCPASPWQITCLCNPQSPA  
 RPPHTPACPPALR\*MGGVMIPTPPHICRHT\*TVSQWAPRAPLQQDSFPLVCQFQFKFPEVNLICLNTGQ  
 DY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mg4915\\_e09.zip](https://cdn.origene.com/chromatograms/mg4915_e09.zip)

**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



ACCN: NM\_001258464

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. [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.

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:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. 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.

RefSeq: [NM\\_001258464.2](#)

RefSeq Size: 6871 bp

RefSeq ORF: 1269 bp

Locus ID: 5080

UniProt ID: [P26367](#)

Cytogenetics: 11p13

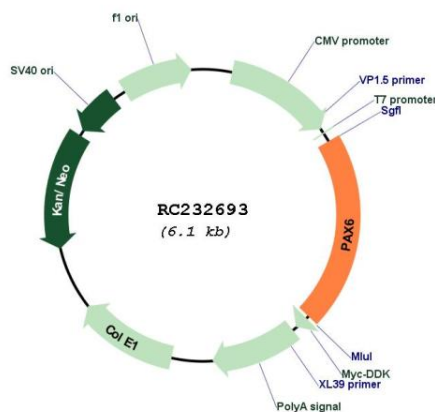
**Protein Families:** Adult stem cells, Druggable Genome, Embryonic stem cells, Transcription Factors

**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]

**Product images:**



Circular map for RC232693