

Product datasheet for **RC232724**

PAX6 (NM_001258462) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PAX6 (NM_001258462) 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)



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ORF Nucleotide Sequence:

>RC232724 representing NM_001258462
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCAGAACAGTCACAGCGGAGTGAATCAGCTCGGTGGTGTCTTTGTCAACGGGCGGCCACTGCCGGACT
 CCACCCGCGAGAAGATTGTAGAGCTAGCTCACAGCGGGGCCCGCGTGGCAGATTTCCCGAATTCTGCA
 GACCCATGCAGATGCAAAAGTCCAAGTGTGGACAATCAAACGTGTCCAACGGATGTGTGAGTAAAT
 CTGGGCAGGTATTACGAGACTGGCTCCATCAGACCCAGGGCAATCGGTGGTAGTAAACCGAGAGTAGCGA
 CTCCAGAAGTTGTAAAGCAAAATAGCCAGTATAAGCGGGAGTGCCCGTCCATCTTTGCTTGGGAAATCCG
 AGACAGATTACTGTCCGAGGGGGTCTGTACCAACGATAACATAACCAAGCGTGTCAATAAACAGAGTT
 CTTGCAACCTGGCTAGCGAAAAGCAACAGATGGGCGCAGACGGCATGTATGATAAACTAAGGATGTTGA
 ACGGGCAGACCGAAGCTGGGGCACCCGCCCTGGTTGGTATCCGGGGACTTCGGTGCCAGGGCAACCTAC
 GCAAGATGGCTGCCAGCAACAGGAAGGAGGGGAGAGAATACCAACTCCATCAGTTCCAACGGAGAAGAT
 TCAGATGAGGCTCAAATGCGACTTCAGCTGAAGCGGAAGCTGCAAAGAAATAGAACATCCTTTACCCAAG
 AGCAAATTGAGGCCCTGGAGAAAGAGTTTGAGAGAACCCATTATCCAGATGTGTTTGCCCGAGAAAGACT
 AGCAGCCAAAATAGATCTACCTGAAGCAAGAATACAGGTATGGTTTTCTAATCGAAGGGCCAAATGGAGA
 AGAGAAGAAAACTGAGGAATCAGAGAAGACAGGCCAGCAACACACCTAGTCATATTCCTATCAGCAGTA
 GTTTCAGCACCAGTGTCTACCAACCAATCCACAACCCACCACACCGGTTTCTCCTTCACATCTGGCTC
 CATGTTGGGCCGAACAGACACAGCCCTCACAACACCTACAGCGCTCTGCCGCCTATGCCAGCTTACC
 ATGGCAAATAACCTGCCTATGCAACCCAGTCCCAGCCAGACCTCCTCATACTCCTGCATGCTGCCCA
 CCAGCCCTTCGGTGAATGGGCGGAGTTATGATACCTACACCCCCACATATGCAGACACACATGAACAG
 TCAGCCAATGGGCACCTCGGGCACCTTCAACAGGACTCATTTCCTGGTGTGCAGTCCAGTTCAA
 GTTCCCGAAGTGAACCTGATATGTCTCAATACTGGCCAAGATTACAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC232724 representing NM_001258462
 Red=Cloning site Green=Tags(s)

MQNSHSGVNQLGGVFVNGRPLPDSTRQKIVELAHSGARPCDISRILQTHADAKVQVLDNQNVSNGCVSKI
 LGRYYETGSIRPRAIGGSKPRVATPEVVSKIAQYKRECPISFAWEIRDRLLESEGVTNDNIPSVSSINRV
 LRNLASEKQQMGADGMYDKLRMLNGQTGSWGTRPGWYPGTSVPGQPTQDGCQQQEGGGENTNSISSNGED
 SDEAQMRLQLKRKLQRNRTSFTQEIEALEKEFERTHYPDVFARERLAAKIDLPEARIQVWFSNRRAKWR
 REEKLNRQRQASNTPSHIPISSSFSTSVYQPIQPTTPVSSFTSGSMLGRTDTALTNTYSALPPMPSFT
 MANNLPMQPPVPSQTSYSCMLPTSPSVNGRSYDITYPPHMQTHMNSQPMGTSMTTSTGLISPGVSVPVQ
 VPGSEPDMSQYWPRLQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6487_a07.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_001258462

ORF Size: 1308 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_001258462.3](#)

RefSeq Size: 6925 bp

RefSeq ORF: 1311 bp

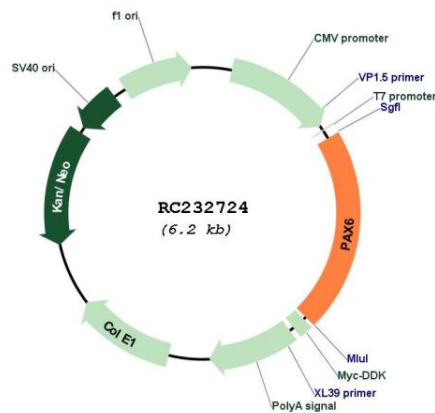
Locus ID: 5080

Cytogenetics: 11p13

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

Protein Pathways:	Maturity onset diabetes of the young
MW:	48.2 kDa
Gene Summary:	<p>This gene encodes paired box protein Pax-6, one of many human homologs of the <i>Drosophila melanogaster</i> gene <i>prd</i>. 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.</p> <p>[provided by RefSeq, Mar 2019]</p>

Product images:



Circular map for RC232724