

## Product datasheet for **SC330688**

### **PAX6 (NM\_001258464) Human Untagged Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** PAX6 (NM\_001258464) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** PAX6  
**Synonyms:** AN; AN1; AN2; ASGD5; D11S812E; FVH1; MGDA; WAGR  
**Vector:** pCMV6-Entry (PS100001)  
**Fully Sequenced ORF:** >SC330688 representing NM\_001258464.  
**Blue**=Insert sequence **Red**=Cloning site **Green**=Tag(s)

ATGCAGAACAGTCACAGCGGAGTGAATCAGCTCGGTGGTGTCTTTGTCAACGGGCGGCCACTGCCGGAC  
TCCACCCGGCAGAAGATTGTAGAGCTAGCTCACAGCGGGCCCGCGTGCACATTTCCGAATTCTG  
CAGGTGTCCAACGGATGTGTGAGTAAAATTCTGGGCAGGTATTACGAGACTGGCTCCATCAGACCCAGG  
GCAATCGGTGGTAGTAAACCGAGAGTAGCGACTCCAGAAGTTGTAAGCAAAATAGCCAGTATAAGCGG  
GAGTGCCCGTCCATCTTTGCTTGGGAAATCCGAGACAGATTACTGTCCGAGGGGGTCTGTACCAACGAT  
AACATACCAAGCGTGTCAATAAACAGAGTTCTTCGCAACCTGGCTAGCGAAAAGCAACAGATGGGC  
GCAGACGGCATGTATGATAAACTAAGGATGTTGAACGGGCAGACCGGAAGCTGGGGCACCCGCCCTGGT  
TGGTATCCGGGGACTTCGGTGCCAGGGCAACCTACGCAAGATGGCTGCCAGCAACAGGAAGGAGGGGA  
GAGAATACCAACTCCATCAGTTCCAACGGAGAAGATTCAGATGAGGCTCAAATGCGACTTCAGCTGAAG  
CGGAAGCTGCAAAGAAATAGAACATCCTTTACCAAGAGCAAAATTGAGGCCCTGGAGAAAGAGTTTGAG  
AGAACCCATTATCCAGATGTGTTTGCCCGAGAAAGACTAGCAGCCAAAATAGATCTACCTGAAGCAAGA  
ATACAGGTATGGTTTTCTAATCGAAGGGCCAAATGGAGAAGAGAAGAAAACTGAGGAATCAGAGAAGA  
CAGGCCAGCAACACACCTAGTCATATTCCTATCAGCAGTAGTTTCAGCACCAGTGTCTACCAACCAATT  
CCACAACCCACCACACCGGTTTCCTCCTTCACATCTGGCTCCATGTTGGGCCGAACAGACACAGCCCTC  
ACAAACACCTACAGCGCTCTGCCGCTATGCCAGCTTCACCATGGCAAATAACCTGCCTATGCAACCC  
CCAGTCCCAGCCAGACCTCCTCATACTCCTGCATGCTGCCACCAGCCCTTCGGTGAATGGGCGGAGT  
TATGATACCTACACCCCCACATATGCAGACACACATGAACAGTCAGCCAATGGGCACCTCGGGCACC  
ACTTCAACAGGACTCATTTCCCCTGGTGTGTCAGTTCAGTTCAGTTCCCGGAAGTGAACCTGATATG  
TCTCAATACTGGCCAAGATTACAGTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001258464  
**Insert Size:** 1269 bp



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<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_001258464.1</a>
<b>RefSeq Size:</b>	6871 bp
<b>RefSeq ORF:</b>	1269 bp
<b>Locus ID:</b>	5080
<b>UniProt ID:</b>	<a href="#">P26367</a>
<b>Cytogenetics:</b>	11p13
<b>Protein Families:</b>	Adult stem cells, Druggable Genome, Embryonic stem cells, Transcription Factors
<b>Protein Pathways:</b>	Maturity onset diabetes of the young
<b>MW:</b>	46.7 kDa
<b>Gene Summary:</b>	<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. [provided by RefSeq, Mar 2019]</p> <p>Transcript Variant: This variant (6) differs in the 5' UTR compared to variant 1. Variants 1, 3, 6 and 7 encode the same isoform (a).</p>