

## Product datasheet for **RC207783**

### **PDE6 alpha (PDE6A) (NM\_000440) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PDE6 alpha (PDE6A) (NM_000440) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PDE6 alpha
Synonyms:	CGPR-A; PDEA; RP43
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide  
Sequence:

>RC207783 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGGCGAGGTGACAGCAGAGGAGGTGGAGAAGTTCCTGGACTCGAATATTGGCTTTGCCAAACAGTACT  
ACAACCTCCACTACCGGCCAAGCTCATCTCCGACTCCTTGGGGCCAAGGAGGCTGCCGTGGACTTCAG  
CAACTACCACTCCCCGAGCAGCATGGAGGAGAGCGAAATCATCTTTGATCTCCTGCGGGACTTTTCAGGAG  
AATTTACAGACAGAGAAATGCATCTTCAATGTCATGAAGAAGCTGTGCTTCTCCTGCAGGCAGACCGCA  
TGAGCCTGTTTATGTACCGGACCCGCAATGGCATCGCAGAGCTGGCCACCAGGCTTTTCAATGTCCACAA  
GGATGCTGTCTCGAGGACTGCCTGGTGTGCCCCGACCAAGAGATCGTCTTCCCTTTGGACATGGGCATC  
GTGGGCCATGTGCGCACACTCTAAGAAGATTGCTAACGTCCCCAACACAGAGGAGGATGAGCATTTCTGTG  
ACTTTGTGGACATCCTCACAGAGTACAAGACCAAGAACATCTTGGCTTCCCCATAATGAATGGGAAGGA  
TGTGGTGGCCATAATCATGGCTGTGAATAAAGTGGATGGATCCCCTTACCAAGAGAGATGAAGAGATT  
CTTCTCAAGTACCTCAATTTTGCAAATCTAATCATGAAGGTGTACCACCTGAGTTACCTGCACAACCTGTG  
AAACTCGAGCTGGCCAGATACTGCTGTGGTCTGGGAGCAAAGTCTTTGAAGAACTTACGGACATCGAACG  
ACAGTTCACAAAAGCCCTGTACACAGTCCGTGCTTTCCTCAACTGTGACAGATACTCTGTGGGTCTCTTA  
GACATGACCAAGCAGAAGGAATTTTGGATGTGTGGCCGTTCTGATGGGTGAAGTTCACCTTACTCTG  
GTCCCAGGACTCCGGATGGAAGAGAAATTAACCTTTACAAGGTCAATTGACTACATCTGTCATGGCAAAGA  
GGACATCAAAGTCATCCGAATCCACCTCCTGACCATTGGGCTTAGTAAGCGGTCTCCCAGCTTATGTT  
GCCCAGAATGGCCTGATTTGCAACATCATGAATGCGCCTGCGGAGGACTTTTTGCAATTCAGAAAGAAC  
CTCTGGATGAGTCTGGATGGATGATTAATAATGTGCTTCAATGCCGATTGTGAACAAGAAGGAAGAAAT  
TGTGGAGTGGCCACATTTTACAATCGTAAAGATGGGAAGCCCTTGGATGAAATGGATGAGACGCTCATG  
GAGTCTTTGACTCAATTTCTGGGCTGGTCTGTCTTAAATCCTGACACCTATGAGTCAATGAATAAATCTG  
AAAATAGGAAGGATATTTTCCAGGACATAGTAAAATATCATGTGAAGTGTGACAATGAAGAAATTCAGAA  
AATCTTGAACCAAGAGAGGTGTATGGGAAGGAGCCATGGGAGTGTGAGGAAGAGGAGCTGGCTGAGATC  
CTGCAAGCGGAGCTGCCAGATGCAGATAAATACGAAATTAATAAATTTCACTTCACTGACTTACCCTAA  
CAGAACTGGAGCTGGTAAAATGTGAATACAGATGATTATGAGCTCAAAGTGGTGGATAAATTTACAT  
TCCACAAGAGGCCCTGGTGGGTTTCACTGACTCCCTGAGTAAGGGCTACCGCAAGATCACCTACCACAAC  
TGGCGGCACGGCTTCAACGTGGGGCAGACCATGTTCTCCCTGCTGGTACGGGAAAGCTGAAGCGCTACT  
TCACGGACCTAGAGGCCCTGGCCATGGTCACTGCTGCTTTCTGCCATGACATTGACCACAGAGGCCACAA  
TAACCTCTACCAGATGAAATCCCAGAACCCTGGCCAAGCTCCATGGGTCTCTATCTTGGAAAGACAC  
CACTTGGAGTTTGGCAAAACACTGCTCAGAGACGAGAGCCTGAATATCTTTCAAAACCTCAATCGTCGAC  
AGCATGAGCATGCCATCCACATGATGGACATTGCAATCATTGCCACAGACCTCGCCCTGTATTTCAAGAA  
GAGGACGATGTTCCAAAAGATCGTGGATCAGTCTAAGACATATGAGAGTGAACAGGAGTGGACACAGTAC  
ATGATGCTGGAGCAGACACGGAAGGAAATCGTTATGGCCATGATGATGACCGCTGTGATCTCTCAGCCA  
TCACCAAAACCTGGGAGGTGCAGAGCCAGGTAGCTCTGCTGGTGGCTGCTGAATTTCTGGAAACAAGGTGA  
CCTGGAGCGCACGGTGTGCAACAGAATCCCATTCCCATGATGGACAGAAACAAGCAGATGAATCCCT  
AAGCTTCAAGTCGGCTTCAATTGACTTTGTTTGCACCTTCTGCTACAAGGAATTCTCCCGTTTCCACGAGG  
AGATCACCCCAATGTTGGACGGGATCACCAACAATCGCAAGGAGTGAAGGCGCTTGGTGTGAGTACGA  
TGCCAAGATGAAGGTGCAGGAGGAGAAGAAGCAGAAACAGCAGTCGGCCAAGTCAGCAGCCGAGGAAAT  
CAGCCGGGGGAAACCCAGCCAGGGGTGCAACTACATCCAAGTCTGCTGCATCCAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC207783 protein sequence  
 Red=Cloning site Green=Tags(s)

MGEVTAEEVEKFLDSNIGFAKQYYNLHYRAKLISDLLGAKEAAVDFSNYHSPSSMEESEIIFDLLRDFQE  
 NLQTEKCIFNVMKKLCFLQADRMSLFMYRTRNGIAELATRLFNVHKDAVLEDCLVMPDQEIFVPLDMGI  
 VGHVAHSSKIANVPNTEDEHFCDVDILTEYTKNILASPIMNGKDVVAIIMAVNKVDGSHFTKRDEEI  
 LLKYLNFANLIMKVYHLSYLHNCETRRGQILLWSGSKVFEELTDIERQFHKALYTVRAFLNCDRYSVGLL  
 DMTKQKEFFDVWPVLMGEVPPYSGPRTPDGREINFYKVIDYILHGKEDIKVIPNPPPDHWALVSGLPAYV  
 AQNGLICNIMNAPAEFFAFQKEPLDESGWMIKNVLSMPIVNKKEEIVGVATFYNRKDGKPFDEMETLM  
 ESLTQFLGWSVLNPDYESMNKLENRKDIFQDIVKYHVKCDNEEQKILKTREYVKEPWECEEEELAEI  
 LQAELPDADKYEINKFHFSDLPLTELELVKCGIQMYELKVVDFHQPQALVRFMYSLSKGYRKITYHN  
 WRHGFNVGQTMFSLLVTKLRYFTDLEALAMVTAAFCHDIDHRGTNNLQMKSQNPLAKLHGSSILERH  
 HLEFGKTLRDESLNIFQNLNRRQHEHAHMMDIAIIATDLALYFKKRTMFQKIVDQSKTYESEQWETQY  
 MMLEQTRKEIVMAMMTACDLSAITKPWEVQSQVALLVAAEFWEQGLERTVLQQNPIMPMDRNKADEL  
 KLQVGFIDFVCTFVYKEFSRFHEEITPMLDGITNNRKEWKALADEYDAKMKVQEEKKQKQSAKSAAGN  
 QPGGNPSPGGATTSKSCCIQ

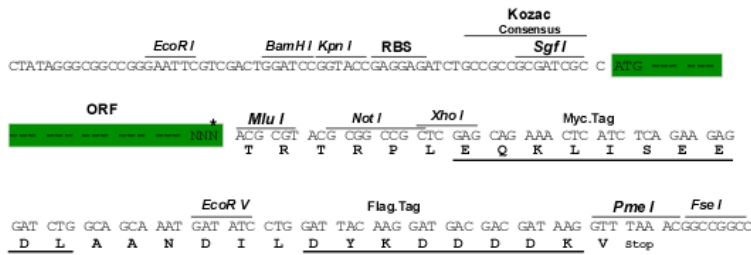
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk6263\\_h11.zip](https://cdn.origene.com/chromatograms/mk6263_h11.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

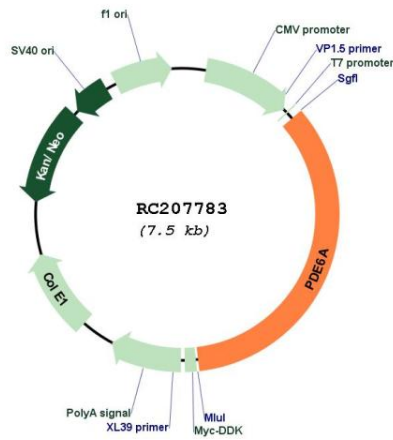
Cloning sites used for ORF Shuttling:



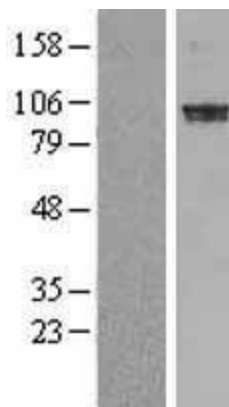
\* The last codon before the Stop codon of the ORF

<b>ACCN:</b>	NM_000440
<b>ORF Size:</b>	2580 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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_000440.3</a>
<b>RefSeq Size:</b>	5659 bp
<b>RefSeq ORF:</b>	2583 bp
<b>Locus ID:</b>	5145
<b>UniProt ID:</b>	<a href="#">P16499</a>
<b>Cytogenetics:</b>	5q32
<b>Protein Families:</b>	Druggable Genome
<b>MW:</b>	99.5 kDa
<b>Gene Summary:</b>	This gene encodes the cyclic-GMP (cGMP)-specific phosphodiesterase 6A alpha subunit, expressed in cells of the retinal rod outer segment. The phosphodiesterase 6 holoenzyme is a heterotrimer composed of an alpha, beta, and two gamma subunits. cGMP is an important regulator of rod cell membrane current, and its dynamic concentration is established by phosphodiesterase 6A cGMP hydrolysis and guanylate cyclase cGMP synthesis. The protein is a subunit of a key phototransduction enzyme and participates in processes of transmission and amplification of the visual signal. Mutations in this gene have been identified as one cause of autosomal recessive retinitis pigmentosa. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC207783



Western blot validation of overexpression lysate (Cat# [LY424714]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207783 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).