

Product datasheet for **SC300070**

PDE6 alpha (PDE6A) (NM_000440) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PDE6 alpha (PDE6A) (NM_000440) Human Untagged Clone
Tag:	Tag Free
Symbol:	PDE6 alpha
Synonyms:	CGPR-A; PDEA; RP43
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene sequence for NM_000440 edited
TTGCAGACTGCAAACTGCCATTGGAAGGCCTCCGTCCCAGTCCCTTCTACAGAGTAGCCA
GTGGGATTCCCAGCCATGGGCGAGGTGACAGCAGAGGAGGTGGAGAAGTTCCTGGACTCG
AATATTGGCTTTGCCAAACAGTACTACAACCTCCACTACCGGGCCAAGCTCATCTCCGAC
CTCCTTGGGGCCAAGGAGGCTGCCGTGGACTTCAGCAACTACCACTCCCCGAGCAGCATG
GAGGAGAGCGAAATCATCTTTGATCTCCTGCGGGACTTTCAGGAGAATTTACAGACAGAG
AAATGCATCTTCAATGTATGAAGAAGCTGTGCTTCTCCTGCAGGCAGACCCGCATGAGC
CTGTTTCATGTACCGGACCCGCAATGGCATCGCAGAGCTGGCCACCAGGCTTTTCAATGTC
CACAAGGATGCTGCTCGAGGACTGCCTGGTGTGCCCCGACCAAGAGATCGTCTTCCCT
TTGGACATGGGCATCGTGGGCCATGTGCGCACACTTAAGAAGATTGCTAACGTCCCCAAC
ACAGAGGAGGATGAGCATTCTGTGACTTTGTGGACATCCTCACAGAGTACAAGACCAAG
AACATCTTGGCTTCCCCATAATGAATGGGAAGGATGTGGTGGCCATAATCATGGCTGTG
AATAAAGTGGATGGATCCCACTTACCAAGAGAGATGAAGAGATTCTTCTCAAGTACCTC
AATTTTGCAAATCTAATCATGAAGGTGTACCACCTGAGTTACCTGCACAACGTGAAACT
CGACGTGGCCAGATACTGCTGTGGTCTGGGAGCAAAGTCTTTGAAGAATTACGGACATC
GAACGACAGTTCACAAAAGCCCTGTACACAGTCCGTGCTTTCCTCAACTGTGACAGATAC
TCTGTGGGTCTCTTAGACATGACCAAGCAGAAGGAATTTTTTGTGTGTGGCCGGTTCTG
ATGGGTGAAGTTCACCTTACTCTGGTCCCAGGACTCCGGATGGAAGAGAAATTAACCTT
TACAAGGTCATTGACTACATCCTGCATGGCAAAGAGGACATCAAAGTCATCCCGAATCCA
CCTCCTGACCATTGGGCTTTAGTAAGCGGTCTCCAGCTTATGTTGCCAGAAATGGCCTG
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GATGAGTCTGGATGGATGATTAATAATGTGCTTCAATGCCGATTGTGAACAAGAAGGAA
GAAATTTTGGAGTGGCCACATTTTACAATCGTAAAGATGGGAAGCCCTTTGATGAAATG
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ACCTATGAGTCAATGAATAAACTTGAAAATAGGAAGGATATTTTCCAGGACATAGTAAAA
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CCAGATGCAGATAAATACGAAATTAATAAATTTCACTTCAGTGACTTACCCCTAACAGAA
CTGGAGCTGGTAAAATGTGGAATACAGATGTATTATGAGCTCAAAGTGGTGGATAAATTT
CACATTCCACAAGAGGCCCTGGTGGGTTTCACTTCAGTGACTTACCCCTAACAGAA
ATCACCTACCACAACGTGGCGGCACGGCTTCAACGTGGGGCAGACCATGTTCTCCCTGCTG
GTGACGGGAAAGCTGAAGCGCTACTTACGGACCTAGAGGCCCTGGCCATGGTCACTGCT
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AACCCACTGGCCAAGCTCCATGGGTCTCTATCTTGAAAAGACACCCTTGGAGTTTGGC
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GAGCATGCCATCCACATGATGGACATTGCAATCATTGCCACAGACCTCGCCCTGTATTTT
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AATCCCATTTCCATGATGGACAGAAACAAGCAGATGAACTCCCTAAGCTTCAAGTCGGC
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TCCTGCTGCATCCAGTAAACCACTGGGGATGTGCTGGCTGGACGGCACCACCCTTTCCT
GGGAAGAGATGACTCAAGCCAGTGAAGACCACACACCTTGAGAAGTAGAAGAGTCATAG
GATTTGAAAGCTGTTAGAGAATTTAGCTTCCAGGACTGTTCAATCTTTTGGCTTCCCTGG
GCCACATTTGGAAGAATTGTCTTGGGTACACATAAAATACAGTAACTAATGATAGCTG
TTGAACTTAAAAAAAAAAAAAAAAAAAA
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000440 unedited
 AGGGGAGGGGGNNNGGGGGGTCATATTTGTATACGACTCACTATAGGCGGCCGGAAT
 TCGGCACGAGGTTGCAGACTGCAAAACTGCCATTGGAAGGCCTCCGTCCCAGTCTTCTA
 CAGAGTAGCCAGTGGGATCCCAGCCATGGGCGAGGTGACAGCAGAGGAGGTGGAGAAGT
 TCCTGGACTCGAATATTGGCTTTGCCAAACAGTACTACAACTCCACTACCGGGCCAAGC
 CATCTCCGACCTCCTTGGGGCCAAGGAGGCTGCCGTGGACTTCAGCAACTACCACTCCC
 CGAGCAGCATGGAGGAGAGCGAAATCATCTTTGATCTCCTGCGGGACTTTCAGGAGAATT
 TACAGACAGAGAAATGCATCTTCAATGTATGAAGAAGCTGTGCTTCTCCTGCAGGCAG
 ACCGCATGAGCCTGTTTATGTACCGGACCCGAATGGCATCGCAGAGCTGGCCACCAGGC
 TTTTCAATGTCCACAAGGATGCTGTCTCGAGGACTGCCTGGTATGCCCGACCAAGAGA
 TCGTCTTCCCTTTGGACATGGGCATCGTGGCCATGTGCGCACTCTAAGAAGATTGCTA
 ACGTCCCCAACACAGAGGAGGATGAGCATTCTGTGACTTTGTGGACATCCTCACAGAGT
 ACAAGACCAAGAACATCTTGGCTCCCCCATAATGAATGGGAAGGATGTGGTGGCCATAA
 TCATGGCTGTGAATAAAGTGGATGGATCCCACTTACCAAGAGAGATGAAGAGATTCTTC
 TCAAGTACCTCAATTNTGCAAATCTAATCATGAAGGTGTACCACCTGAGTTACCTGCANC
 ACTGTGAAACTCGACGTGGCCAGATACTGCTGTGGTCTGGGAG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_000440 unedited
 NGGGTTTTGNNNNNNNCCCGCCTTGGNNGATGGCACTTNCCAGGNCCAGNAAAGCACTG
 GGGNAGGGTCACAGGGNTGCCACCCGGTTCTGTTTCTGAGGAAACAGCTATGACCGCGGCC
 CAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTAAAGTTCAACAGCTATCATTAGTGTTA
 CTGATTTTATGTGTGACCCAAGACAATCTTCCAATGTGGCCAGGGAAGCCAAAAGAT
 TGAACAGTCTGGAAGCTAAATCTCTAACAGCTTCAAATCCTATGACTCTTCTACTTC
 TCAAGGTGTGGTCTTCCACTGGCTTGAGTCATCTTCCCAGGAAAGGGTGGTGCCT
 CCAGCCAGCACATCCCCAGTGGTGTACTGGATGCAGCAGGACTTGGATGTAGTTGCACC
 CCCTGGGCTGGGGTTTCCCCCGGCTGATTTCTGCGGCTGTGACTTGGCCGACTGCTG
 TTTCTGCTTCTTCTCCTCCTGCACCTTCATCTTGGCATCGTACTCATCAGCAAGCGCCTT
 CCACTCCTTGGCATTGTTGGTGTATCCCCTCAACATTGGGGTGTCTCCTCGTGGAAACG
 GGAGAATTCCTTGTAGACGAAGGTGCAACAAAGTCAATGAAGCCGACTTGAAGCTTAGG
 GAGTTTCTGCTTTGTTTCTGTCCATCATGGGAATGGGATTCTGTTGCAGCACCCTGCG
 CTCANGTCACCTTGTCCAGATTTTCAGCAGCCACCAGCAGAGCTACCTGGCTCTGCAC
 CTCCCAGNNTTGGTGTGGCTGAGAGATCACAGCGGTCATCATCATGGCCATAACGAT
 TTCCTTCCGTGTCTGCTNCAGCATCATGTACTGTGTTCCACTCCTGGTCACTCTCATATGA

Restriction Sites:

Please inquire

ACCN:

NM_000440

Insert Size:

3000 bp

OTI Disclaimer:

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).

OTI Annotation:

There is 1 nucleotide difference between the OriGene clone and the NCBI reference ORF. These result in the substitution of 1 aa.

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_000440.1](#), [NP_000431.1](#)

RefSeq Size: 2944 bp

RefSeq ORF: 2583 bp

Locus ID: 5145

UniProt ID: [P16499](#)

Cytogenetics: 5q32

Protein Families: Druggable Genome

Gene Summary: 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]