

Product datasheet for **MR216600**

Pde9a (NM_001163748) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pde9a (NM_001163748) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Pde9a
Synonyms:	PDE9A1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR216600 representing NM_001163748
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGCGCGCTCCTCAAGCTACCGGCCAAGGCCATCTACCTAGACATCGATGGACGCATCCAGAAGG
 TGGTTTTAGCAAGTACTGCAACTCCAGTGACATCATGGACCTGTTCTGTATCGCCACCGCCTGCCTCG
 GAACACCACCATCTCCCTTTTAACCACAGACGACGCCATGGTCTCCATCGATCCCACCATGCCTGCGAAT
 TCAGAGCGCACTCCCTACAAGGTGAGACCTGTGGCTGTGAAGCAAGTGTCTGAACGAGAAGAAGTTATCC
 AGGGCGTGTGGCCAGGTGGCGGAACAATTTCCAGAGCGTTAAGATCAACGAGCTGAAAGCCGAAGT
 TGCAAATCACCTGGCCGTCTGGAGAAACGGGTGGAATTGGAAGGACTTAAAGTGGTGGAGATCGAAAA
 TGCAAGAGTGACATTAAGAGATGCGGGAGGAGTTGGCAGCTAGGAACAGCAGGACCAACTGTCCATGTA
 AATACAGTTTTTTGGATAACAAGAAGTTGACACCTCGACGTGATGTCCCACTTACCCCAAGTACCTGCT
 CTCCCCAGAGACCATCGAAGCCCTACGGAAGCCACCTTTGATGTCTGGCTTTGGGAACCAACGAGATG
 CTGAGCTGTTTAGAACATATGTACCACGACCTTGGTCTGGTCAAGGACTTCAGCATCAACCAATCACGC
 TCCGCAGGTGGCTCTGTGTGCATGACAACACAGGAACAACCCCTTCCACAACCTCCGGCAGTCTT
 CTGTGTGACACAGATGATGTACAGTATGGTCTGGCTCTGTGGCCTCCAGGAGAAGTTTTCCAGATGGAC
 ATCTTGGTCTGATGACTGCAGCCATCTGCCATGACCTGGACCACCCAGGGTACAACAATACATACCAGA
 TCAATGCCCGCACGGAATCGTGTGCGCTACAACGACATCTCACCGTGGAGAACCACCACTGCGCCAT
 TGCCTTCCAGATCCTGGCAAGACCTGAGTGCAACATCTTCGCCAGTGTGCCACCCGAGGGCTTACGGCAG
 ATCAGGCAGGGGATGATCACATTGATCTGGCTACCGACATGGCAAGGCATGCTGAAATTTATGGATTCTT
 TCAAAGAAAAGATGGAGAATTTTACTACAGCAACGAGGACACCTGACCCTGCTGAAGATGATCTCAT
 AAAATGCTGTGATATCTCAATGAAGTCCGTCATGGAGGTGGCAGAACCCTGGGTGGACTGTTTACTG
 GAAGAATATTTTATGCAGAGTGACCGTGAGAAGTCCGAAGGCCTTCTGTGGCCCATTCATGGACCGAG
 ACAAGTGACCAAAGCAACAGCCAAATTTGGTTTCAAGTTTGTCTGATCCCAATGTTTGAACAGT
 GACCAAGCTTCCCGTGTGTTGAGGAGACCATGCTGCGGCCGCTCTGGGAGTCCCGAGAACACTACGAG
 GAGCTGAAGCAGCTGGACGATGCCATGAAGGAGTTGCAGAAGAAGACAGAGAGCTTAACATCTGGGGCC
 CGGAAAACACCACAGAGAAGAACAGAGATGCAAAAGACAGTGAAGGCCATTCTCTCCAAAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR216600 representing NM_001163748
 Red=Cloning site Green=Tags(s)

MGAGSSSYRPAIYLDIDGRIQKVVFSKYCNSSDIMDLFCIATGLPRNTTISLLTTDDAMVSIPTMPAN
 SERTPYKVRPVAVKQVSEEREELIQGLVAQVAEQFSRAFKINELKAEVANHLAVLEKRVELEGLKVVEIEK
 CKSDIKKMREELAARNSRTNCPCKYSFLDNKLLTPRRDVPTYPKYLLSPETIEALRKPTFDVWLWEPNEM
 LSCLEHMYHDLGLVRDFSINPITLRRWLLCVHDNYRNNPFHNRHCFVQMMYSMVWLCGLQEKFSQMD
 ILVLMTAAICHDLDHPGYNNTYQINARTELAVERYNDISPLENHCAIAFQILARPECNIFASVPPEGFRQ
 IRQGMITLILATDMARHAEIMDSFKEKMFNDYSNEEHLTLLKMILIKCCDISNEVRPMEVAEPWVDCLL
 EEYFMQSDREKSEGLPVAPFMDRDKVTKATAQIGFIKFVLIIPMFETVTKLFPVVEETMLRPLWESREHYE
 ELKQLDDAMKELQKKTESLTSGAPENTTEKNRDAKDSEGHSPNN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_001163748

ORF Size: 1602 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_001163748.1](#), [NP_001157220.1](#)

RefSeq Size: 2061 bp

RefSeq ORF: 1605 bp

Locus ID: 18585

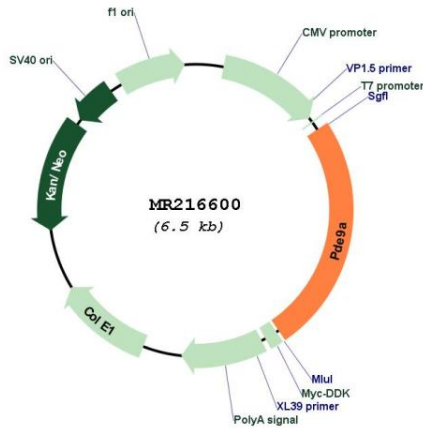
UniProt ID: [O70628](#)

Cytogenetics: 17 B1

MW: 62.1 kDa

Gene Summary: Specifically hydrolyzes the second messenger cGMP, which is a key regulator of many important physiological processes (PubMed:9624145). Highly specific: compared to other members of the cyclic nucleotide phosphodiesterase family, has the highest affinity and selectivity for cGMP. Specifically regulates natriuretic-peptide-dependent cGMP signaling in heart, acting as a regulator of cardiac hypertrophy in myocytes and muscle. Does not regulate nitric oxide-dependent cGMP in heart (PubMed:25799991). Additional experiments are required to confirm whether its ability to hydrolyze natriuretic-peptide-dependent cGMP is specific to heart or is a general feature of the protein (Probable). In brain, involved in cognitive function, such as learning and long-term memory (PubMed:22328573, PubMed:24746365).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR216600