

Product datasheet for **MG216600**

Pde9a (NM_001163748) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pde9a (NM_001163748) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pde9a
Synonyms:	PDE9A1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG216600 representing NM_001163748
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGCGCGCTCCTCAAGCTACCGGCCAAGGCCATCTACCTAGACATCGATGGACGCATCCAGAAGG
 TGGTTTTAGCAAGTACTGCAACTCCAGTGACATCATGGACCTGTTCTGTATCGCCACCGCCTGCCTCG
 GAACACCACCATCTCCCTTTTAACCACAGACGACGCCATGGTCTCCATCGATCCCACCATGCCTGCGAAT
 TCAGAGCGCACTCCCTACAAGGTGAGACCTGTGGCTGTGAAGCAAGTGTCTGAACGAGAAGAAGTTATCC
 AGGGCGTGTGGCCAGGTGGCGGAACAATTTCCAGAGCGTTTAAAGTCAACGAGCTGAAAGCCGAAGT
 TGCAAATCACCTGGCCGTCTGGAGAAACGGGTGGAATTGGAAGGACTTAAAGTGGTGGAGATCGAAAAA
 TGCAAGAGTGACATTAAGAGATGCGGGAGGAGTTGGCAGCTAGGAACAGCAGGACCAACTGTCCATGTA
 AATACAGTTTTTTGGATAACAAGAAGTTGACACCTCGACGTGATGTCCCACTTACCCCAAGTACCTGCT
 CTCCCCAGAGACCATCGAAGCCCTACGGAAGCCACCTTTGATGTCTGGCTTTGGGAACCAACGAGATG
 CTGAGCTGTTTAGAACATATGTACCACGACCTTGGTCTGGTCAAGGACTTCAGCATCAACCCAATCACGC
 TCCGCAGGTGGCTGCTCTGTGTGCATGACAACACAGGAACAACCCCTTCCACAACCTCCGGCAGTCTT
 CTGTGTGACACAGATGATGTACAGTATGGTCTGGCTCTGTGGCCTCCAGGAGAAGTTTTCCAGATGGAC
 ATCTTGGTCTGATGACTGCAGCCATCTGCCATGACCTGGACCACCCAGGGTACAACAATACATACCAGA
 TCAATGCCCGCACGGAATCGTGTGGCTACAACGACATCTCACCGTGGAGAACCACCACTGCGCCAT
 TGCTTCCAGATCCTGGCAAGACCTGAGTGCAACATCTTCGCCAGTGTGCCACCCGAGGGCTTCAAGCAG
 ATCAGGCAGGGGATGATCACATTGATCCTGGCTACCGACATGGCAAGGCATGCTGAAATTTATGGATTCTT
 TCAAAGAAAAGATGGAGAATTTGACTACAGCAACGAGGAGCACCTGACCCTGCTGAAGATGATGATCTCAT
 AAAATGCTGTGATATCTCCAATGAAGTCCGTCATGGAGGTGGCAGAACCCTGGGTGGACTGTTTACTG
 GAAGAATATTTTATGCAGAGTGACCGTGAGAAGTCCGAAGGCCTTCTGTGGCCCAATTCATGGACCGAG
 ACAAGTGACCAAAGCAACAGCCCAAATTTGGGTTTCATCAAGTTTGTCTGATCCCAATGTTTGAACAGT
 GACCAAGCTCTTCCCGTTGTTGAGGAGACCATGCTGCGGCCGCTCTGGGAGTCCCGAGAACACTACGAG
 GAGCTGAAGCAGCTGGACGATGCCATGAAGGAGTTGCAGAAGAAGACAGAGAGCTTAACATCTGGGGCCC
 CGGAAAACACCACAGAGAAGAACAGAGATGCAAAAACAGTGAAGGCCATTCTCTCCAAAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG216600 representing NM_001163748
 Red=Cloning site Green=Tags(s)

MGAGSSSYRPKAIYLDIDGRIQKVVFSKYCNSSDIMDLFCIATGLPRNTTISLLTTDDAMVSIPTMPAN
 SERTPYKVRPVAVKQVSEEREELIQGLVAQVAEQFSRAFKINELKAEVANHLAVLEKRVELEGLKVVEIEK
 CKSDIKKMREELAARNSRTNCPCKYSFLDNKLTTPRRDVPTYPKYLLSPETIEALRKPTFDVWLWEPNEM
 LSCLEHMYHDLGLVRDFSINPITLRRWLLCVHDNYRNNPFHNRHCFVQMMYSMVWLCGLQEFQMD
 ILVLMTAAIACHDLDPGYNNYQINARTELVRYNDISPLENHCAIAFQILARPECNIFASVPPEGFRQ
 IRQGMITLILATDMARHAEIMDSFKEKMFNDYSNEEHLTLLKMILIKCCDISNEVRPMEVAEPVWDCLL
 EEYFMQSDREKSEGLPVAPFMDRDKVTKATAQIGFIKFLVLPFETVTKLFPVVEETMLRPLWESREHYE
 ELKQLDDAMKELQKKTESLTSGAPENTTEKNRDAKDSEGHSPN

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

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:	<ol style="list-style-type: none">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
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]