

Product datasheet for **RG223749**

Cytochrome P450 2D6 (CYP2D6) (NM_000106) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cytochrome P450 2D6 (CYP2D6) (NM_000106) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cytochrome P450 2D6
Synonyms:	CPD6; CYP2D; CYP2D7AP; CYP2D7BP; CYP2D7P2; CYP2D8P2; CYP2DL1; CYPIID6; P450-DB1; P450C2D; P450DB1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG223749 representing NM_000106
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGGGCTAGAAGCACTGGTGGCCCTGGCCGTGATAGTGCCATCTTCTGCTCCTGGTGGACCTGATGC
 ACCGGCGCCAACGCTGGGCTGCACGCTACTCACCAGGCCCTGCCACTGCCCGGCTGGCAACCTGCT
 GCATGTGGACTTCCAGAACACACATACTGCTTCGACCAGTTGCGGCGCCGCTTCGGGGACGTGTTGAGC
 CTGCGAGCTGGCCTGGACGCCGGTGGTCTGCTCAATGGGCTGGCGGCCGTGCGCGAGGCGCTGGTGAACC
 ACGGCGAGGACACCGCCGACCGCCCGCTGTGCCATCACCAGATCCTGGGTTTTGGGCCGCTTCCCA
 AGGGGTGTTCTGGTGCCTATGGGCCCGCTGGCGGAGCAGAGGCGCTTCTCCGTCTCCACCTTGCGC
 AACTTGGGCTGGCAAGAAGTCGCTGGAGCAGTGGGTGACCGAGGAGGCCGCTGCCTTTGTGCCGCT
 TCGCAACCACTCCGACGCCCTTTCGCCCAACGGTCTTTGGACAAAGCCGTGAGCAACGTGATCGC
 CTCCTCACTGCGGGCGCCGCTTCGAGTACGACGACCCTCGCTTCTCAGGCTGCTGGACCTAGCTCAG
 GAGGGACTGAAGGAGGATCGGGCTTCTGCGCGAGGTGCTGAATGCTGTCCCGCTCCTCTGCATATCC
 CAGCGCTGGCTGGCAAGGTCTACGCTTCCAAAAGGCTTCTGACCCAGCTGGATGAGCTGCTAACTGA
 GCACAGGATGACCTGGGACCCAGCCAGCCCCCGAGACCTGACTGAGGCCCTCCTGGCAGAGATGGAG
 AAGGCCAAGGGGAACCTGAGAGCAGCTCAATGATGAGAACCTGCGCATAGTGGTGGCTGACCTGTTCT
 CTGCCGGGATGGTGACCACCTCGACCACGCTGGCTGGGGCTCCTGCTCATGATCTACATCCGGATGT
 GCAGCGCCGTGTCCAACAGGAGATCGACGACGTGATAGGCGAGGTGCGGCGACCAGAGATGGGTGACCAG
 GCTCACATGCCCTACCACTGCCGTGATTCATGAGGTGCAGCGCTTTGGGGACATCGTCCCCCTGGGTG
 TGACCCATATGACATCCCGTGCATCGAAGTACAGGGCTTCGCATCCCTAAGGGAACGACACTATCAC
 CAACCTGTATCGGTGCTGAAGGATGAGGCCGCTGGGAGAAGCCCTTCGCTTCCACCCGAACTTC
 CTGGATGCCAGGGCCACTTTGTGAAGCCGAGGCCCTTCTGCCTTTCTCAGCAGGCCGCGTGCATGCC
 TCGGGGAGCCCTGGCCGCATGGAGCTTCTCCTTCTTACCTCCCTGCTGCAGCACTTACGCTTCTC
 GGTGCCCACTGGACAGCCCCGCCAGCCACCATGGTGTCTTTGCTTCTGCTGACCCCATCCCCCTAT
 GAGCTTTGTGCTGTGCCCGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG223749 representing NM_000106
 Red=Cloning site Green=Tags(s)

MGLEALVPLAVIVAIFLLLLVDMHRRQRWAARYSPGPLPLPGLGNLLHVDFQNTPYCFDQLRRRFGDVFS
 LQLAWTPVVVLNGLAAVREALVTHGEDTADRPPVPITQILGFGPRSQGVFLVRYGPAWREQRRFSVSTLR
 NLGLGKKSLEQWVTEEAACLCAAFANHSGRPFPRNGLLDKAVSNVIAASLTCGRRFEYDDPRFLRLDLAQ
 EGLKEESGFLREVLNAVIVLLHIPALAGKVLRFQKAFLLQDELLEHRTWDPAPPRDLTEAFLAEME
 KAKGNPESSFNDENLRIVVADLFSAGMVTSTTLAWGLLLMILHPDVQRRVQQEIDDVIGQVRRPEMGDQ
 AHMPYTTAVIHEVQRFQDIVPLGVTHMTRDIEVQGFRIKGTTLITNLSSVLKDEAVWEKPFRRFHEPHF
 LDAQGHFVKPEAFLPFSAGRRACLGEPLARMELFFFTSLLQHFVSVPTGQPRPSHHGVFAFLVTPSPY
 ELCAVPR

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_000106

ORF Size: 1491 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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:

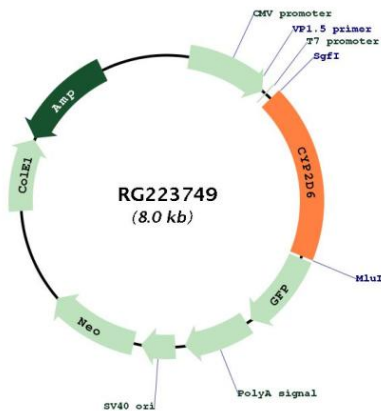
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store 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_000106.4](#), [NP_000097.2](#)

RefSeq Size:	1673 bp
RefSeq ORF:	1494 bp
Locus ID:	1565
UniProt ID:	P10635
Cytogenetics:	22q13.2
Domains:	p450
Protein Families:	Druggable Genome, P450, Transmembrane
Protein Pathways:	Drug metabolism - cytochrome P450

Gene Summary: This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. This protein localizes to the endoplasmic reticulum and is known to metabolize as many as 25% of commonly prescribed drugs. Its substrates include antidepressants, antipsychotics, analgesics and antitussives, beta adrenergic blocking agents, antiarrhythmics and antiemetics. The gene is highly polymorphic in the human population; certain alleles result in the poor metabolizer phenotype, characterized by a decreased ability to metabolize the enzyme's substrates. Some individuals with the poor metabolizer phenotype have no functional protein since they carry 2 null alleles whereas in other individuals the gene is absent. This gene can vary in copy number and individuals with the ultrarapid metabolizer phenotype can have 3 or more active copies of the gene. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2014]

Product images:



Circular map for RG223749