

Product datasheet for **RG209042**

Cytochrome P450 17A1 (CYP17A1) (NM_000102) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cytochrome P450 17A1 (CYP17A1) (NM_000102) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cytochrome P450 17A1
Synonyms:	CPT7; CYP17; P450C17; S17AH
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG209042 representing NM_000102
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGTGGGAGCTCGTGGCTCTCTTGTCTTACCCTAGCTTATTTGTTTTGGCCCAAGAGAAGGTGCCTGT
 GTGCCAAGTACCCCAAGAGCCTCCTGTCCCTGCCCTGGTGGGACGCTGCCATTCTCCCAGACATGG
 CCATATGCATAACAACCTTCTTCAAGCTGCAGAAAAATATGGCCCATCTATTCTGTTCTGATGGGCACC
 AAGACTACAGTGATTGTGCGGCCACCACCAGCTGGCCAAGGAGGTGCTTATTAAGAAGGGCAAGGACTTCT
 CTGGGCGGCCCTCAAATGGCAACTCTAGACATCGCGTCCAACAACCGTAAGGGTATCGCCTTCGCTGACTC
 TGGCGCACACTGGCAGCTGCATCGAAGGCTGGCGATGGCCACCTTTGCCCTGTTCAAGGATGGCGATCAG
 AAGCTGGAGAAGATCATTGTGAGGAAATCAGTACATTGTGTGATGCTGGCCACCCACAACGGACAGT
 CCATAGACATCTCTTTCTGTCTTCGTGGCGGTAAACCAATGTCATCTCCTTGATCTGCTCAATACCTC
 CTACAAGAAATGGGACCCTGAGTTGAATGTCATACAGAATTACAATGAAGGCATCATAGACAACCTGAGC
 AAAGACAGCCTGGTGGACCTAGTCCCCTGGTTGAAGATTTTCCCAACAAAACCTGGAAAAATTAAGA
 GCCATGTTAAAATACGAAATGATCTGCTGAATAAAATACTTGAATAATACAAGGAGAAATTCGGAGTGA
 CTCTATACCAACATGCTGGACACACTGATGCAAGCCAAGATGAACTCAGATAATGGCAATGCTGGCCCA
 GATCAAGACTCAGAGCTGCTTTTCAAGATAACCACATTCTCACCACCATAGGGGACATCTTTGGGGCTGGCG
 TGGAGACCACCACCTCTGTGGTTAAATGGACCCTGGCCTTCTGCTGCACAATCCTCAGGTGAAGAAGAA
 GCTCTACGAGGAGATTGACCAGAATGTGGGTTTCAGCCGCACACCAACTATCAGTGACCGTAACCGTCTC
 CTCCTGCTGGAGGCCACCATCCGAGAGGTGCTTCGCCTCAGGCCCGTGGCCCTATGCTCATCCCCACA
 AGGCCAACGTTGACTCCAGCATCGGTGAGTTTGTGTTGGTGGACAAGGGCACAGAAGTTATCATCAATCTGTG
 GCGCTGCATCACAATGAGAAGGAGTGGCACCAGCCGGATCAGTTCATGCCTGAGCGTTTCTTGAATCCA
 GCGGGGACCCAGCTCATCTCACCCTCAGTAAGCTATTTGCCCTTCGGAGCAGGACCTCGCTCCTGTATAG
 GTGAGATCCTGGCCCGCCAGGAGCTTCTCCTCATCATGGCCTGGCTGCTGCAGAGGTTTCGACCTGGAAAT
 GCCAGATGATGGGAGCTGCCCTCCCTGGAAGGCATCCCCAAGGTGGTCTTTCTGATCGACTCTTTCAA
 GTGAAGATCAAGGTGCGCCAGGCTGGAGGAAGCCAGGCTGAGGGTAGCACC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG209042 representing NM_000102
 Red=Cloning site Green=Tags(s)

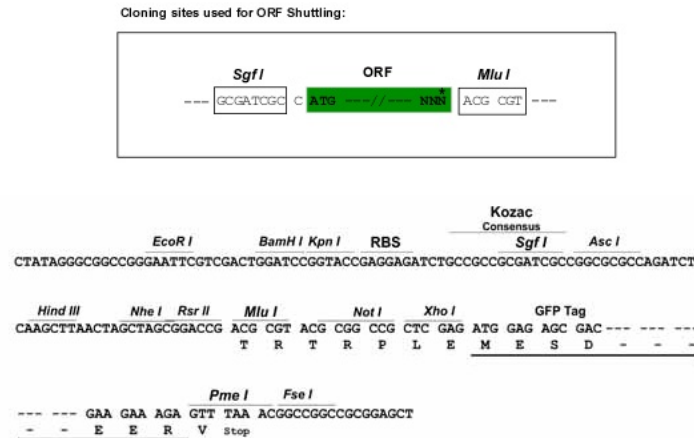
MWELVALLLLTLAYLFWPKRRCPGAKYPKSLLSLPLVGSPLPFLPRHGHMHNFFKQKQYGIYSVRMGT
 KTTVIVGHHQLAKEVLIKKGKDFSGRPQMATLDIASNNRKGIAFADSGAHWQLHRRRLAMATFALFKDGDQ
 KLEKIICQEISTLCDMLATHNGQSIDISFPVFAVTVNIVSLICFNYSYKNGDPELNVIQNYNEGIIDNLS
 KDSLVDLVPWLKIFPNKTLEKLSHVKIRNDLLNKILENYKEKFRSDSITNMLDTLMQAKMNSDNGNAGP
 DQDSELLSDNHILTTIGDIFGAGVETTTSVVKWTLAFLHNPQVKKLYEEIDQNVGFSRTPTISDRNRL
 LLLLEATIREVLRRLRPVAPMLIPHKANVDSSIGEFVAVDKGTEVIINLWALHHEKEWHQPDQFMPERFLNP
 AGTQLISPSVSYLPGAGPRSCIGEILARQELFLIMAWLLQRFDLEVPDDGQLPSLEGIPKVVFLIDSFK
 VKIKVRQAWREAQAEGST

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_000102

ORF Size: 1524 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_000102.2](#), [NP_000093.1](#)

RefSeq Size: 1755 bp

RefSeq ORF: 1527 bp

Locus ID: 1586

UniProt ID: [P05093](#)

Cytogenetics: 10q24.32

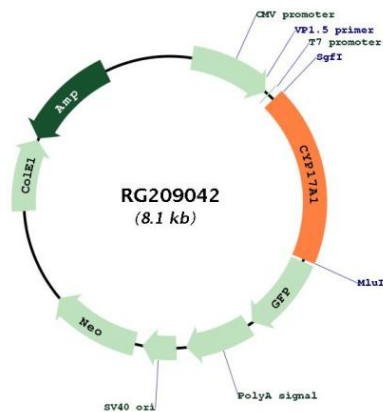
Domains: p450

Protein Families: Druggable Genome, P450

Protein Pathways: C21-Steroid hormone metabolism, Metabolic pathways

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. It has both 17alpha-hydroxylase and 17,20-lyase activities and is a key enzyme in the steroidogenic pathway that produces progestins, mineralocorticoids, glucocorticoids, androgens, and estrogens. Mutations in this gene are associated with isolated steroid-17 alpha-hydroxylase deficiency, 17-alpha-hydroxylase/17,20-lyase deficiency, pseudohermaphroditism, and adrenal hyperplasia. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG209042