

Product datasheet for **RG216416**

CYP21A2 (NM_000500) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CYP21A2 (NM_000500) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CYP21A2
Synonyms:	CA21H; CAH1; CPS1; CYP21; CYP21B; P450c21B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG216416 representing NM_000500
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTGCTCCTGGCCTGCTGCTGCTGCTGCCCTGCTGGCTGGCGCCCGCTGCTGTGGAAGTGGTGA
 AGCTCCAGAGCCTCCACCTCCCGCTCTTGCCCGGGCTTCTTGACTTGCTGCAGCCCGACCTCCCAAT
 CTATCTGCTTGGCCTGACTCAGAAATTCGGGCCATCTACAGGCTCCACCTTGGGCTGCAAGATGTGGT
 GTGCTGAACTCCAAGAGGACATTGAGGAAGCCATGGTCAAAAAGTGGGCAGACTTTGCTGGCAGACCTG
 AGCCACTTACCTACAAGCTGGTGTCTAGGAACTACCCGGACCTGTCTTGGGAGACTACTCCCTGCTCTG
 GAAAGCCACAAGAAGCTCACCCGCTCAGCCCTGCTGCTGGGCATCCGTGACTCCATGGAGCCAGTGGT
 GAGCAGCTGACCCAGGAGTTCTGTGAGCGCATGAGAGCCAGCCCGCACCCCTGTGGCCATTGAGGAGG
 AATTCTCTCTCCTCACCTGCAGCATCATCTGTTACCTCACCTTCGGAGACAAGATCAAGGACGACA
 AATGCCTGCCTATTACAAATGTATCCAGGAGGTGTTAAAAACCTGGAGCCACTGGTCCATCCAAATTGTG
 GACGTGATTCCTTTCTCAGTTCTTCCCAATCCAGGTCTCCGGAGGCTGAAGCAGGCCATAGAGAAGA
 GGGATCACATCGTGGAGATGCAGCTGAGGCAGCACAAGGAGAGCCTCGTGGCAGGCCAGTGGAGGGACAT
 GATGGACTACATGCTCCAAGGGTGGCGCAGCCGAGCATGGAAGAGGGCTCTGGACAGCTCCTGGAAGGG
 CACGTGCACATGGCTGCAGTGGACCTCCTGATCGGTGGCAGTGCAGCCAGCAACACCCTCTCCTGGG
 CCGTGGTTTTTTTTGCTTACCACCCTGAGATTACGAGCGACTGCAGGAGGAGCTAGACCACGA
 CCCTGGTGCTCCAGCTCCCGGGTCCCTACAAGGACCGTGCAGCGCTGCCCTTGCTCAATGCCACCATC
 GCCGAGGTGCTGCGCCTCGCGCCGTGTGCCCTTAGCCTTCCCCACCGCACACAGCCCGCAGCAGCA
 TCTCCGGCTACGACATCCCTGAGGGCACAGTCAATCCGAACCTCAAGGCCCCACCTGGATGAGAG
 GGTCTGGGAGAGGCCACATGAGTTCTGGCCTGATCGCTTCTGAGGAGCCAGGCAAGA
 AACTCCAGAGCTCTG
 GCCTTCGGCTGCGGTGCCGCGTGTGCCTGGGCGAGCCGCTGGCGCGCTGGAGCTTCTCGTGGTCTGA
 CCCGACTGCTGCAGGCCTTACGCTGCTGCCCTCCGGGGACGCCCTGCCCTCCCTGCAGCCCTGCCCA
 CTGCAGTGTCATCCTCAAGATGCAGCCTTCCAAAGTGGCGCTGCAGCCCCGGGGATGGGGGCCACAGC
 CCGGGCCAGAGCCAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG216416 representing NM_000500
 Red=Cloning site Green=Tags(s)

MLLLGLLLLLPLLAGARLLWNWKLQSLHLPPLAPGFLHLLQPDLPIYLLGLTQKFGPIYRHLGLQDVV
 VLNSKRTIEEAMVKKWADFAGRPEPLTYKLVSRNYPDLSLGDYSLLWKAHKKLRSALLLIGRDSMEPVV
 EQLTQEFCEMRMQPGTPVAIEEEFSLTCSIICYLTFGDKIKDDNMPAYYKCIQEVLTWWSHSIQIV
 DVIPFLRFFPNPGLRRLKQAIKRDHIVEMQLRQHKESLVAGQWRDMMDYMLQGVAQPSMEEGSGQLLEG
 HVHMAAVDLLIGTETTANTLSWAVVFLHHPHPIQRLQEELDHELPGASSSRVYPYKDRARLPLLNATI
 AEVLRRLRPVPLALPHRTTRPSSISGYDIPEGTVIIPNLQGAHLDET VWERPHEFWPDRFLEPGKNSRAL
 AFGCGARVCLGEPLARLELFVVLTRLLQAFTLLPSGDALPSLQPLPHCSVILKMQPFQVRLQPRGMGAHS
 PGQSQ

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:



ACCN: NM_000500

ORF Size: 1485 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_000500.5](#), [NP_000491.2](#)

RefSeq Size: 2114 bp

RefSeq ORF: 1488 bp

Locus ID: 1589

UniProt ID: [P08686](#)

Cytogenetics: 6p21.33

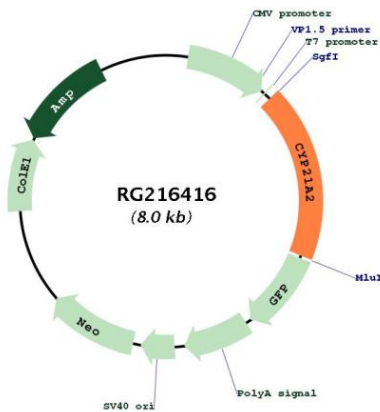
Domains: p450

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 and hydroxylates steroids at the 21 position. Its activity is required for the synthesis of steroid hormones including cortisol and aldosterone. Mutations in this gene cause congenital adrenal hyperplasia. A related pseudogene is located near this gene; gene conversion events involving the functional gene and the pseudogene are thought to account for many cases of steroid 21-hydroxylase deficiency. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG216416