

Product datasheet for **RG220836**

CYP8B1 (NM_004391) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CYP8B1 (NM_004391) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CYP8B1
Synonyms:	CP8B; CYP12
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG220836 representing NM_004391
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGTTTCTCTGGGTCCAGTGTCTGGGAGCTCTGCTGGTGGTCATTGCTGGATACCTGTGCCTGCCAGGGA
 TGCTCCGACAACGCAGGCCATGGGAGCCCCCTCTGGACAAGGGTACCGTGCCTGGCTTGCCATGCCAT
 GGCTTTCCGGAAGAATATGTTTGAATTTCTGAAGCGCATGAGGACCAAGCATGGGGATGTGTTACAGTG
 CAGCTAGGGGGCCAGTACTTCACTTCGTATGGACCCCTCTCCTTTGGCCCCATCTCAAGGACACAC
 AGAGAAAAGTACTTTGGGCAATATGCAAAAAAAGTGGTGTGAAGGATTTGGATACCGTTCAGTGCA
 AGGGGACCATGAGATGATACACTCAGCCAGCACCAAGTATCTGAGGGGGGATGGCTTGAAGGATCTTAAT
 GAGACCATGCTGGACAGCCTGCTCTTGTAACTGCTGACGTCCAAAGGCTGGAGTCTGGATGCCAGTTGCT
 GGCATGAGGACAGCCTCTTTCGCTTCTGCTATTACATCTTGTTCACAGCTGGCTACCTGAGCTTGTTCGG
 CTACACGAAGGACAAGGAGCAGGACCTGCTACAGGCAGGAGATTATTCATGGAGTTCGCAAGTTTGAC
 CTCTTTTTCCCAAGGTTTGTCTACTCCCTGCTGTGGCCCCGGGAGTGGCTAGAAGTGGGCCGACTCCAGC
 GTCTCTTTCACAAGATGCTCTCCGTGAGCCACAGCCAGGAGAAGGAGGGCATCAGCAACTGGCTGGGCAA
 CATGCTTCAGTTTCTGAGGGAGCAGGGGTACCCTCAGCTATGCAGGACAAGTTCAAATTCATGATGCTC
 TGGGCCTCCCAGGGGAACACGGGCCTACCTCTTCTGGGCCCTTGTACCTCTGAAGCACCCAGAAG
 CTATTCGGGCTGTGAGGGAGGAAGCTACCCAGGTCCTGGGTGAGGCCAGGCTGGAGACCAAGCAGTCCTT
 TGCCTTCAAACCTCGTGCCCTGCAACACACCCAGTCTAGACAGCGTGGTGGAGGAGACGCTGCGGCTG
 AGGGTGCACCCACCTCCTCAGGTTGGTTCATGAAGACTATACCCTGAAGATGTCAGTGGCCAGGAGT
 ATCTGTTCCGCCATGGAGACATCTGGCCCTCTTCCCTACCTCTCAGTGCACATGGACCTGACATCCA
 CCCTGAGCCACCGTCTTCAAGTACGATCGCTTCCCTCAACCCTAATGGCAGCCGAAAGTGGACTTCTTC
 AAGACAGGCAAGAAGATCCACCCTACACCATGCCCTGGGGTTCGGGCGTTTCCATCTGCCCTGGGAGGT
 TCTTTGCACTCAGTGAGGTGAAGCTCTTATCCTGCTTATGGTCACACACTTTGACTTAGAGTTGGTGG
 CCCTGACACACCCTACCCATGTTGACCCGACGCTGGGGTTTGGCACCATGCAGCCAGCCACGAT
 GTGCGCTCCGCTACCGCTGCATCCTACAGAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG220836 representing NM_004391
 Red=Cloning site Green=Tags(s)

MVLWGPVLGALLVVIAGYLCLPGMLRQRRPWEPPLDKGTVPWLGHAMAFRKNMFEFLKRMRTKHGDVFTV
 QLGGQYFTFVMDPLSFGPILKDTQRKLDGQYAKKLVKVFYRSVQGDHEMIHSASTKYLRDGLKDLN
 ETMLDSLFSVMLTSKGWLDASCWHEDSLFRFCYYILFTAGYLSLFGYTKDKEQDLLQAGELFMEFRKFD
 LLFPRFVYSLWPREWLEVGRLQRLFHKMLSVSHSQEKEGISNWLGNMLQFLREQGVPSAMQDKFNFMM
 WASQGNTPGTSFWALLYLLKHPEAIRAVREEATQVLGEARLETKQSF AFLK GALQHTPVLDVVEETLRL
 RAAPTLLRLVHEDYTLKMSSQEYLF RHGDILALFPYLSVHMDDIHPPTVFKYDRFLNPNGRKVDFF
 KTGKKIHHYTMPWGSVSI CPGRFFALSEVKLF ILLMVTHFDLELVDPTPLPHVDPQRWGFMTMQPSHD
 VRFYRLHPTE

TRTRPLE - GFP Tag - V

Restriction Sites:

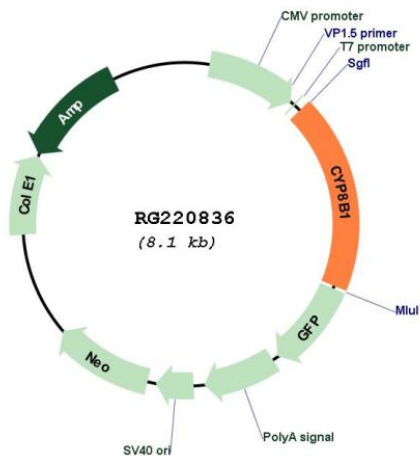
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_004391

ORF Size: 1503 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_004391.1](#), [NP_004382.1](#)

RefSeq Size: 3951 bp

RefSeq ORF: 1506 bp

Locus ID: 1582

UniProt ID: [Q9UNU6](#)

Cytogenetics: 3p22.1

Domains: p450

Protein Families: Druggable Genome, P450, Transmembrane

Protein Pathways: Metabolic pathways, PPAR signaling pathway, Primary bile acid biosynthesis

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 endoplasmic reticulum membrane protein catalyzes the conversion of 7 alpha-hydroxy-4-cholesten-3-one into 7-alpha,12-alpha-dihydroxy-4-cholesten-3-one. The balance between these two steroids determines the relative amounts of cholic acid and chenodeoxycholic acid both of which are secreted in the bile and affect the solubility of cholesterol. This gene is unique among the cytochrome P450 genes in that it is intronless. [provided by RefSeq, Jul 2008]