

## Product datasheet for **RC222647**

### **CYP7B1 (NM\_004820) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CYP7B1 (NM_004820) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CYP7B1
Synonyms:	CBAS3; CP7B; SPG5A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC222647 representing NM\_004820  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCAGGAGAAGTGTCCGCGGCCACGGGCCGCTTTTCGTCGGAGCGGTTGGGCCTCCCGGCCCTGGCCC  
 TCGCCCGGCCCTGCTGCTCCTGGCCCTGCTTGTCTGTCGGCGCACCAAGAGACCCGGTGGACCTCC  
 ATTGATAAAAAGGTTGGCTTCTTATCTTGGAGTGGTCTGAACCTACGAAAAGACCCCTTAAAGTTCATG  
 AAAACACTTCAAAGCAACATGGTGACACTTTCACAGTCTTCTTGGTGGAAAAGTACATAACATTTATCC  
 TGGACCCCTTCCAGTACCAGCTAGTGATAAAAAATCATAAACAATTAAGCTTTCGAGTATTTTCTAATAA  
 ATTATTAGAGAAAGCATTAGCATCAGTCAGTTGCAAAAAATCATGACATGAATGATGAGCTTCACCTC  
 TGCTATCAATTTTGAAGGCAATCTTTGGACATACTCTGGAAAGCATGATGCAGAATCTAAAACAAG  
 TTTTGAACCCAGCTGTTAAAACCACAAGTTGGACACGGCAGAACTGTATCCATTCTGCAGCTCAAT  
 AATATTTGAGATCACATTTACAACATATATGGAAAAGTTATTGTTTGTGACAACAACAATTTATTAGT  
 GAGCTAAGAGATGATTTTTTAAAATTTGATGACAAGTTTGCATATTTAGTATCCAACATACCCATTGAGC  
 TTCTAGGAAATGTCAAGTCTATTAGAGAGAAAATTATAAAATGCTTCTCATCAGAAAAGTTAGCCAAGAT  
 GCAAGGATGGTCAGAAGTTTTTCAAAGCAGGCAAGATGCTCTGGAGAAAATATTATGTGCACGAGGACCTT  
 GAAATAGGAGCACATCATTTAGGCTTCTCTGGCCCTCTGTGGCAAACTATTTCAACTATGTTCTGGG  
 CAATGTATTATCTTCTGCGGCACCCAGAAGCTATGGCAGCAGTGCCTGACGAAATGACCGTTTGTGCA  
 GTCAACAGGTCAAAGAAAGGCTCTGGATTTCCATCCACCTCACCAGAGAACAATTGGACAGCCTAATC  
 TGCCTAGAAAGCAGCATTTTGAAGCTTACGACTGTCTCATATTCAACCACCATTGTTTTGTTGAGC  
 AGGATTTGACTCTCAGTTCAGAGACCGGGACTACTGTGTGCGAAAGGGAGACTTGGTAGCCATTTTCC  
 TCCAGTCTACATGGTGACCCTGAAATCTTTGAAGCTCCAGAGGAGTTTAGATATGATCGTTTTATAGAA  
 GATGGTAAAGAAGAAAACACCTTTTTCAAAGAGGAAAAGCTGAAGTGTACCTAATGCCGTTTGGAA  
 CTGGAACAGCAAATGTCCAGGCCGATTTTTTGCACCTATGGAAAATAACAATTGTTGTTATACTTTT  
 AACTTATTTGATTTAGAAATAATTGATGATAAGCCCATAGGACTAAACTACAGCCGCTTGTGTTGGT  
 ATTCAGTATCCAGATTCTGATGTTTTATTAGATACAAAGTAAATCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC222647 representing NM\_004820  
 Red=Cloning site Green=Tags(s)

MAGEVSAATGRFSLERLGLPGLALAAALLLLALCLLVRTRRRPGEPLIKGWLPLYGVVNLNRKDPLRFM  
 KTLQKQHGDTFTVLLGGKYITFILDPPFQYQLVIKNHKQLSFRVFSNKLLEKAFSISQLQKNHDMNDELHL  
 CYQFLQKSLDILLESMMQNLKQVFEPQLLKTTSWDTAELYPFSSIIIFEITFTTIYGKVI VCDNNKFIS  
 ELRDDFLKFDDKFAYLVSNPIELLGNVKSIREKIIKCFSSSEKLAKMQGWSEVFSRQDVLEKYVYHEDL  
 EIGAHLGLFLWASVANTIPTMFWAMYLLRHPEMAAVRDEIDRLLQSTGQKKGSGFPPIHLTREQLDSL  
 I CLESSIFEALRLSSYSTTIRFVEEDLTLSETGDYCVRKGDLVAFPPVLHGDPEIFEAPEEFYRDRFIE  
 DGKKKTTFFKRGKCLKYLMFPGTGTSKCPGRFFALMEIKQLLVILLTYFDLEIIDDKPIGLNYSRLLFG  
 IQYPSDVLFRYKVKV

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_004820

ORF Size: 1518 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\\_004820.5](#)

RefSeq Size: 2395 bp

RefSeq ORF: 1521 bp

Locus ID: 9420

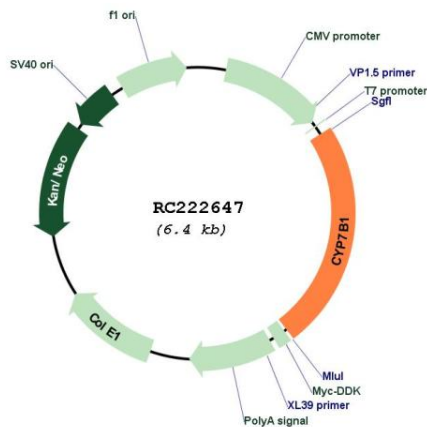
UniProt ID: [O75881](#)

Cytogenetics: 8q12.3

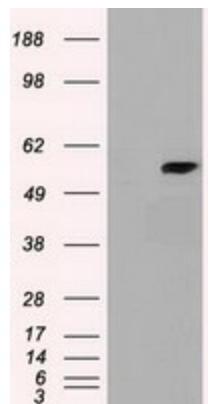
**Domains:** p450  
**Protein Families:** Druggable Genome, P450, Transmembrane  
**Protein Pathways:** Primary bile acid biosynthesis  
**MW:** 58.3 kDa

**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 first reaction in the cholesterol catabolic pathway of extrahepatic tissues, which converts cholesterol to bile acids. This enzyme likely plays a minor role in total bile acid synthesis, but may also be involved in the development of atherosclerosis, neurosteroid metabolism and sex hormone synthesis. Mutations in this gene have been associated with hereditary spastic paraplegia (SPG5 or HSP), an autosomal recessive disorder. [provided by RefSeq, Apr 2016]

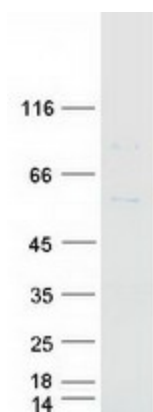
**Product images:**



Circular map for RC222647



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY cyp7b1 (Cat# RC222647, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-cyp7b1 (Cat# [TA500244]). Positive lysates [LY417726] (100ug) and [LC417726] (20ug) can be purchased separately from OriGene.



Coomassie blue staining of purified CYP7B1 protein (Cat# [TP322647]). The protein was produced from HEK293T cells transfected with CYP7B1 cDNA clone (Cat# RC222647) using MegaTran 2.0 (Cat# [TT210002]).