

## Product datasheet for **RR208359**

### Cyp7a1 (NM\_012942) Rat Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cyp7a1 (NM_012942) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cyp7a1
Synonyms:	CHAP; CYP7; CYP7S1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RR208359 representing NM\_012942  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGATGACTATTTCTTTGATTTGGGAATTGCCGTGTTGGTGAGCTGTTGCATATGGTTATTGTTGGAA  
 TAAGGAGAAGGAAAGCTGGTGAACCTCCTTTGGAGAACGGTTGATTCCGTACCTGGGCTGTGCTCTGAA  
 ATTTGGATCTAATCCTCTTGAGTTCCTAAGAGCTAATCAAAGGAAGCATGGTCACGTTTTTACCTGCAAA  
 CTGATGGGAAATATGTCCATTTTCATCACAACCTCCCTGTACATCCACAAAGTCTTATGTCATGGAAAT  
 ATTTTACTGGAAAAATTTTACTACTACTTCTGCGAAGGCATTTGGACACAGAAGCATTGACCCAAA  
 TGATGGAAATACCACGGAAAATATAAACAAACACTTTTACCAAACCTCCAGGGAGATGCTCTGTGTTCA  
 CTTTCTGAAGCCATGATGCAAAACCTCCAATCTGTCATGAGACCTCCTGGCCTTCTAAATCAAAGAGCA  
 ATGCCTGGGTACGGAAGGGATGTATGCCTTCTGTTACCGAGTGTGTTGAAGCTGGCTATCTAACACT  
 GTTTGGCAGAGATATTTCAAAGACAGACACAAAAAGCACTTATTCTAAACAACCTTGACAACCTCAA  
 CAATTTGACCAAGTCTTTCCGGCACTGGTGGCAGGCCTTCTATTCACTTGTTCAGACCCGACATAAAG  
 CTCGGGAAAAGCTGGCTGAGGGATTGAAGCACAAGAACCTGTGTGTGAGGGACCAGGTCTCTGAACCTGAT  
 CCGTCTACGTATGTTTCTCAATGACACGCTCTCCACCTTTGACGACATGGAGAAGGCCAAGACGCACCTC  
 GCTATTCTCTGGGCATCTCAAGCAAACACCATTCTGCAACCTTTTGGAGCTTATTTCAAATGATCAGGA  
 GTCCTGAAGCAATGAAAGCAGCCTCTGAAGAAGTGAGTGGAGCTTTACAGAGTGTGGCCAAAGAGCTCAG  
 CTCTGGAGGGAGTGCCATTTACTTGGATCAAGTGAACCTGAATGACCTGCCGGTACTAGACAGCATCATC  
 AAGGAGCTCTGAGGCTTCCAGTGCATCCTTGAATATCCGCACAGCTAAGGAGGACTTCACTCTCCATC  
 TTGAGGACGGTTCTATAACATCCGAAAAGATGACATGATAGCTCTTTATCCACAGTTAATGCACCTGGA  
 TCTGAAATCTACCCAGACCCTTTGACTTTCAAATATGACCGGTACCTTGATGAAAGCGGAAAGCAAAG  
 ACCACCTTCTACAGTAATGGAAACAAGCTGAAAGTGTCTACATGCCCTTCGGATCAGGCCGACAAAT  
 GTCCTGGAAGACTCTTTGCCGTCGAAGAAATCAAGCAGTTTTTGTCTGATGCTCTCTGCTTTGAACT  
 GGAGTTTGTGGAGAGCCAAGTCAAGTGTCCCTCTAGACCAGTCCCGGGCAGGCTTGGGAATTTGCCA  
 CCACTACATGATATTGAGTTTAAATATAAACTGAAACAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RR208359 representing NM\_012942  
 Red=Cloning site Green=Tags(s)

MMTISLIWGIIVLVSCCIWFIIVGIRRRKAGEPPEENLIPYLGALKFSGSNPLEFLRANQRKHHVFTCK  
 LMGKYVHFITNSLSYHKVLCGKYFDWKKFHYTTSKAFGHRSIDPNDGNTTENINNTFTKTLQGDALCS  
 LSEAMQNLQSVMRPPLPKSKSNAWVTEGMYAFCYRVMFEAGYLTGFRDISKTDQKALILNNDNFK  
 QFDQVFPALVAGLPIHLFKTAHKAREKLAEGLKHKNLVCRDQVSELIRLRMFLNDLSTFDMEKAKTHL  
 AILWASQANTIPATFWSLQFQIRMSPEAMKAASEEVSGALQSAGQELSSGSAIYLDQVQLNDLPVLDSSII  
 KEALRLSSASLNIRTAKEDFTLHLEDGYSYNIKDDMIALYPQLMHLDPETIYPDPLTFKYDRYLDSESKAK  
 TTFYSNGNKLKCFYMPFGSGATICPGRLFVQEIQQLILMLSCFELEFVESQVKCPPLDQSRAGLILP  
 PLHDIEFKYKLLKH

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_012942

ORF Size: 1509 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\\_012942.2](#), [NP\\_037074.1](#)

RefSeq Size: 3544 bp

RefSeq ORF: 1512 bp

Locus ID: 25428

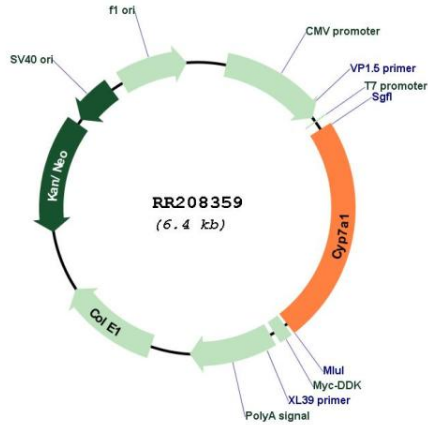
UniProt ID: [P18125](#)

Cytogenetics: 5q12

**MW:** 56.9 kDa

**Gene Summary:** catalyzes the conversion of cholesterol, NADPH, and oxygen to 7-alpha-hydroxycholesterol, NADP(+) and water; plays a role in bile acid biosynthesis and cholesterol metabolism [RGD, Feb 2006]

**Product images:**



Circular map for RR208359