

Product datasheet for **MC217415**

Cyp1a1 (NM_009992) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cyp1a1 (NM_009992) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Cyp1a1
Synonyms:	AHH; AHRR; CP11; Cyp1a2; CYPIA1; P450-1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC217415 representing NM_009992
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCTTCCATGTATGGACTTCCAGCCTTCGTGTGAGCCACAGAGCTGCTCCTGGCTGTACCCGATTCT
 GCCTTGGATTCTGGGTGGTCAGAGCCACAAGAACCTGGGTCCCAAAGGCCTGAAGACTCCACCAGGGCC
 CTGGGGCTTGCCCTTCATTGGTCACATGCTGACTGTGGGGAAGAACCACATCTGCACTGACACGGCTG
 AGTCAGCAGTATGGGACGTGCTGCAGATCCGCATCGGCTCCACTCCTGTGGTGGTGTGAGCGGCTGA
 ACACCATCAAGCAGGCCCTGGTGGGACGGGAGATGACTTCAAGGGCCGGCCAGACCTCTACAGTTCAC
 ACTTATCACTAATGGCAAGAGCATGACTTTAACCAGACTCTGGACCCGTGTGGCTGCCCGCCGGCGC
 CTGGCCAGAATGCCCTGAAGAGCTTCCATAGCCTCGGACCCGACGTCAGCATCCTCTTGCTACTTGG
 AGGAGCACGTGAGCAAGGAGGCTAACTATCTCGTCAGCAAACCTCAGAAGGTGATGGCAGAGTTGGCCA
 CTTTGACCCTTACAAGTATTTGGTCGTGTGAGTCAATCTGTGCCATATGCTTTGGCCAACGT
 TATGACCATGATGACCAAGAGCTGCTCAGCATAGTCAATCTGAGCAATGAGTTTGGGGAGGTTACTGGCT
 CTGGATACCCAGCTGACTTCATTCTGTCTCCGTTACCTGCCTAACTCTTCCCTGGATGCCTTCAAGGA
 CTTGAATGATAAGTTCTACAGTTCATGAAGAAGTTAATCAAAGAGCACTACAGGACATTTGAGAAGGGC
 CACATCCGGGACATCACAGACAGCCTCATTGAGCATTGTCAGGACAGGAAGCTGGACGAGAATGCCAATG
 TCCAGCTGTGAGATGATAAGGTCATCACGATTGTTTTGGACCTCTTTGGAGCTGGGTTTGACACAGTCAC
 AACTGCTATCTCGTGGAGCCTCATGTACCTGGTAACCAACCCTAGGTTACAGAGAAAGATCCAGGAGGAA
 CTAGACACAGTATTGGCAGAGATCGGCAGCCCGGCTTTCTGACAGACCTCAGTGCCTATCTGGAGG
 CCTTCATTCTGGAGACCTCCGGCATTATCCTTCGTCCTCCCTTACCATCCCCACAGCACCACAAGAGA
 TACAAGTCTGAATGGCTTCTATATCCCCAAGGGGTGCTGTGCTTTGTGAACCAAGTGGCAGGTTAACCAT
 GACCGGAACTGTGGGTGACCCAAACGAGTTCGGCCTGAAAGGTTTCTCACCCACAGCGGCACTCTGG
 ACAAGCGCTTGTGAGGAGGTCCTCTTTGGTTTGGGCAAGCGAAAGTGCATCGGAGAGACCATTGG
 CCGATCGGAGGCTTTCTCTTCTGGCCATCTTGTGCTGAGCAATAGAATTTAAGGTGTCTCCAGGGGAG
 AAGGTGGATGACTCCTACCTATGGGCTGACTTTAAACACGCCGCTGTGAACACTTCCAAGTGCAGA
 TGCGGTCTTCTGGTCTCAGCATCTTCAGGCT**TAG**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** Sgfl-Mlul
- ACCN:** NM_009992
- Insert Size:** 1575 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- 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_009992.4](#), [NP_034122.1](#)

RefSeq Size: 2716 bp

RefSeq ORF: 1575 bp

Locus ID: 13076

UniProt ID: [P00184](#)

Cytogenetics: 9 31.34 cM

Gene Summary: A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins. Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (CPR; NADPH-ferrihemoprotein reductase). Catalyzes the hydroxylation of carbon-hydrogen bonds. Exhibits high catalytic activity for the formation of hydroxyestrogens from estrone (E1) and 17beta-estradiol (E2), namely 2-hydroxy E1 and E2, as well as D-ring hydroxylated E1 and E2 at the C15alpha and C16alpha positions. Displays different regioselectivities for polyunsaturated fatty acids (PUFA) hydroxylation. Catalyzes the epoxidation of double bonds of certain PUFA. Converts arachidonic acid toward epoxyeicosatrienoic acid (EET) regioisomers, 8,9-, 11,12-, and 14,15-EET, that function as lipid mediators in the vascular system. Displays an absolute stereoselectivity in the epoxidation of eicosapentaenoic acid (EPA) producing the 17(R),18(S) enantiomer. May play an important role in all-trans retinoic acid biosynthesis in extrahepatic tissues. Catalyzes two successive oxidative transformation of all-trans retinol to all-trans retinal and then to the active form all-trans retinoic acid. May also participate in eicosanoids metabolism by converting hydroperoxide species into oxo metabolites (lipoxygenase-like reaction, NADPH-independent).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longer transcript. Variants 1 and 2 encode the same protein.