

Product datasheet for **MC217414**

Cyp1a1 (NM_001136059) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cyp1a1 (NM_001136059) 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: >MC217414 representing NM_001136059
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGCCTTCCATGTATGGACTTCCAGCCTTCGTGTGAGCCACAGAGCTGCTCCTGGCTGTACCCTATTCT
GCCTTGGATTCTGGGTGGTCAGAGCCACAAGAACCCTGGGTCCCAAAGGCCTGAAGACTCCACCAGGGCC
CTGGGGCTTGCCTTCATTGGTCACATGCTGACTGTGGGGAAGAACCACATCTGCACTGACACGGCTG
AGTCAGCAGTATGGGACGTGCTGCAGATCCGCATCGGCTCCACTCCTGTGGTGGTGTGAGCGGCTGA
ACACCATCAAGCAGGCCCTGGTGGGACAGGAGATGACTTCAAGGGCCGCCAGACCTCTACAGTTCAC
ACTTATCACTAATGGCAAGAGCATGACTTTAACCAGACTCTGGACCCGTGTGGCTGCCCGCCGGCGC
CTGGCCAGAATGCCCTGAAGAGCTTCCATAGCCTCGGACCCGACGTCAGCATCCTCTTGCTACTTGG
AGGAGCACGTGAGCAAGGAGGCTAACTATCTCGTCAGCAAACCTCAGAAGGTGATGGCAGAGTTGCCA
CTTTGACCCTTACAAGTATTTGGTCGTGTGAGTCAATCTGTGCCATATGCTTTGGCCAACTG
TATGACCATGATGACCAAGAGCTGCTCAGCATAGTCAATCTGAGCAATGAGTTTGGGGAGGTTACTGGCT
CTGGATACCCAGCTGACTTCATTCTGTCTCCGTTACCTGCCTAACTCTTCCCTGGATGCCTTCAAGGA
CTTGAATGATAAGTTCTACAGTTCATGAAGAAGTTAATCAAAGAGCACTACAGGACATTTGAGAAGGGC
CACATCCGGGACATCACAGACAGCCTCATTGAGCATTGTCAGGACAGGAAGCTGGACGAGAATGCCAATG
TCCAGCTGTGAGATGATAAGGTCATCACGATTGTTTTGGACCTCTTTGGAGCTGGGTTTGACACAGTCAC
AACTGCTATCTCGTGGAGCCTCATGTACCTGGTAACCAACCCTAGGTTACAGAGAAAGATCCAGGAGGAA
CTAGACACAGTATTGGCAGAGATCGGCAGCCCCGGCTTTCTGACAGACCTCAGTGCCTATCTGGAGG
CCTTCATTCTGGAGACCTCCGGCATTATCCTTCGTCCCCTTACCATCCCCACAGCACCACAAGAGA
TACAAGTCTGAATGGCTTCTATATCCCCAAGGGGTGCTGTGCTTTGTGAACCAAGTGGCAGGTTAACCAT
GACCGGAACTGTGGGTGACCCAAACGAGTTCGGCCTGAAAGGTTTCTCACCCACAGCGGCACTCTGG
ACAAGCGCTTGTGAGGAGAAGTCACTCTCTTGGTTTGGGCAAGCGAAAGTGCATCGGAGAGACCATTGG
CCGATCGGAGGCTTTCTCTTCTGGCCATCTTGTGCTGAGCAATAGAATTTAAGGTGTCTCCAGGGGAG
AAGGTGGATGACTCCTACCTATGGGCTGACTTTAAACACGCCGCTGTGAACACTTCCAAGTGCAGA
TGCGGTCTTCTGGTCTCAGCATCTTCAGGCT**TAG**

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-MluI

ACCN: NM_001136059

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_001136059.2](#), [NP_001129531.1](#)

RefSeq Size: 2637 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 (2) contains an alternate 5' non-coding exon compared to variant 1. Variants 1 and 2 encode the same protein.