

Product datasheet for **MC218751**

Cyp4a12b (NM_172306) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cyp4a12b (NM_172306) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Cyp4a12b
Synonyms:	BC060945; Cyp4a12
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC218751 representing NM_172306
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGAGTGCCTCTGCTCTGAGCTCCATCAGATCCAGGAAGCATCTCTGAGTACCTCAAGTAGCCTCTG
TGCTCAGCCTGCTCCTGCTGCTCTCAAGACAGCCAGCTCTACCTGCACAGGCAATGGCTACTCAGCAG
TACTCAGCAGTCCCATCCCCACCTTCTACTGGCTCTTTGGACACAAGATCTTAAAGGACCAGGACCTT
CAAGATATTCTAACTAGGATTAAGAATTTCCCAAGTGCCTGTCCACAGTGGCTCTGGGGAAGCAAAGTGC
GCATTCAGTGTATGACCCTGACTACATGAAGCTGATTCTGGGGAGATCAGACCCAAAAGCTCATGGTTC
CTACAGATTTCTAGTCCCTGGATTGGGCGTGGTTTGGCTTCTGCTGGATGGACAGACATGGTTTCAGCAC
CGAGGAATGTTGACCCAGCTTCCACTATGACATTCTGAAGCCTTACACGGAAATCATGGCAGACTCTG
TTCATGTCATGCTGGATAAATGGGAACAGATTGTTGGCCAGGATCCACCCTGGAGATCTCCAACACAT
CACCTTGATGACCTTGGACACCATCATGAAGTGTGCCTTCAGCCATGAGGGCAGTGTCCAGTTGGACAGA
AAATACAAGTCCATATCCAGGCAGTTGAGGACCTGAACAATCTCTTTTTCTCCGTGTGCGGAACATCT
TTCACCAGAATGACATCATCTACAGAGTGTCTCTAATGGCTGCTTGGCCAACAGTGCCTGCCAACTTGC
CCATGATCACACAGACCAAGTGTCAAATCAAGGAGGAGTCAACTTCAGGATGAGGAAGGATTGGAAAAG
CTTAAGAAGAAAAGGCGATTGGATTTCTCGACATCCTCCTATTTGCCAGAATGGAAAATGGAAAAGCT
TATCTGATAAGGACCTTCGTGCTGAAGTGGATACTTTTCATGTTTCGAGGGCCATGACACCACAGCTAGTGG
TATCTCCTGGATCTTCTATGCTTTGGCCACAAATCCTGAACATCAACAGAGATGCAGGAAGGAGATCCAA
AGTCTCTTAGGAGATGGGGCTTCTATCACCTGGAACGACCTGGACAAGATGCCCTATACTACCATGTGCA
TCAAGGAGGCCCTGAGGATCTACCCCCCTGTACCAAGTGTGAGCAGAGAGCTCAGCTCACCTGTACCTT
TCCTGATGGACGTTCTTTACCCAAAGGTATCCATGTCATGCTCTCCTTTTATGGCCTTCATCACAACCCA
ACTGTGTGGCCAAATCCAGAGGTGTTTGTCTCCTCGATTTGCACCAGGCTCTCCCGGCACAGCCACT
CATTCTGCCCTTCTCAGGAGGAGCAAGGAAGTGCATTGGGAAACAGTTTGCATGAATGAGCTGAAGGT
GGCTGTGGCCCTGACCCTGCTCCGCTTTGAGCTGCTGCCAGATCCACCAGAGTCCCAATCCCCATACCA
AGAATTGTGTTGAAGTCCAAGAATGGGATCCACTTGCATCTCAAAAAGCTCCA**TAA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_172306

Insert Size: 1527 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_172306.2](#), [NP_758510.2](#)

RefSeq Size: 2395 bp

RefSeq ORF: 1527 bp

Locus ID: 13118

UniProt ID: [A2A974](#)

Cytogenetics: 4 D1

Gene Summary: A cytochrome P450 monooxygenase involved in the metabolism of fatty acids and their oxygenated derivatives (oxylipins) (PubMed:17112342). 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) (PubMed:17112342). Catalyzes predominantly the oxidation of the terminal carbon (omega-oxidation) of saturated and unsaturated fatty acids (PubMed:17112342). May act as a major omega-hydroxylase for dodecanoic (lauric) acid in kidney (PubMed:17112342). Participates in omega-hydroxylation of (5Z,8Z,11Z,14Z)-eicosatetraenoic acid (arachidonate) to 20-hydroxyeicosatetraenoic acid (20-HETE), a signaling molecule acting both as vasoconstrictive and natriuretic with overall effect on arterial blood pressure (PubMed:17112342). Acts as an omega-hydroxylase and epoxidase toward (5Z,8Z,11Z,14Z,17Z)-eicosapentaenoic acid (EPA). Catalyzes the epoxidation of the last double bond of EPA with no preferred stereoselectivity, producing both (R,S) and (S,R) stereoisomers (PubMed:17112342). Can also catalyze the omega-1 and omega-2 oxidation of fatty acids with lower efficiency (PubMed:17112342).[UniProtKB/Swiss-Prot Function]