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Product datasheet for MC202895

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
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)

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Fully Sequenced ORF:

>BC014721 sequence for NM_172306
GAGTTGGTGATCCAGAAGCTGTTGTATCATGAGTGCCTCTGCTCTGAGCTCCATCAGATTCCCAGGAAGC
ATCTCTGAGTACCTTCAAGTAGCCTCTGTGCTCAGCCTGCTCCTGCTGCTCTTCAAGACAGCCCAGCTCT
ACCTGCACAGGCAATGGCTACTCAGCAGTACTCAGCAGTTCCCATCCCCACCTTCTCACTGGCTCTTTGG
ACACAAGATCTTAAAGGACCAGGACCTTCAAGATATTCTAACTAGGATTAAGAATTTCCCAAGTGCCTGT
CCACAGTGGCTCTGGGGAAGCAAAGTGCGCATTCAAGTGTATGACCCTGACTACATGAAGCTGATTCTGG
GGAGATCAGACCCAAAAGCTAATGGTTCCTACAGATTTCTAGCTCCCTGGATTGGGCGTGGTTTGCTTCT
GCTGGATGGACAGACATGGTTTCAGCACCGACGAATGTTGACCCCAGCTTTCCACTATGACATTCTGAAG
CCTTATACGGAAATCATGGCAGACTCTGTTCGTGTAATGCTGGATAAATGGGAACAGATTGTTGGCCAGG
ATTCCACCCTGGAGATCTTTCGACACATCACCTTGATGACCTTGGACACCATCATGAAGTGTGCCTTCAG
CCACGAGGGCAGTGTCCAGTTGGACAGAAAATACAAGTCCTATATCCAGGCAGTTGAGGACCTGAACGAT
CTCGTTTTTTCCCGTGTGCGGAACATCTTTCACCAGAATGACATCATCTACAGAGTGTCCTCTAATGGCT
GCAAGGCTAACAGTGCCTGCAAACTTGCCCATGATCACACAGACCAAGTGATCAAATCAAGGAGGATTCA
ACTTCAGGATGAGGAAGAGTTGGAAAAGCTTAAGAAGAAAAGGCGATTGGATTTCCTGGACATCCTCCTA
TTTGCCAGAATGGAAAATGGAAAAAGCTTATCTGATAAGGACCTTCGTGCTGAAGTGGATACTTTCATGT
TCGAGGGCCATGACACCACAGCTAGTGGTATCTCCTGGATCTTCTATGCTTTGGCCACAAATCCTGAACA
TCAACAGAGATGCAGGAAGGAGATCCAAAGTCTCCTAGGAGATGGGACTTCTATCACCTGGAATGACCTG
GACAAGATGCCCTATACTACCATGTGCATCAAGGAGGCCCTGAGGATCTACCCTCCTGTACCAAGTGTGA
GCAGAGAGCTCAGCTCACCTGTCACCTTTCCAGATGGACGTTCTTTACCCAAAGGTATCCATGTTATGCT
GTCCTTTTATGGCCTTCATCACAACCCAACTGTGTGGCCAAATCCAGAGGTGTTTGATCCTTCTCGATTT
GCACCAGGGTCTTCCCGGCACAGCCACTCATTCCTGCCCTTCTCAGGAGGAGCAAGGAACTGCATTGGGA
AACAGTTTGCGATGAATGAGCTGAAGGTGGCTGTGGCCCTGACCCTGCTCCGCTTTGAGCTGCTGCCAGA
TCCCACCAGAGTCCCAATCCCCATACCAAGAATTGTGTTGAAGTCCAAGAATGGGATCCACTTGCATCTC
AAAAAGCTCCAATAATCTTCACAGGACAAGACAGCTCAAATGGCATGCTGCCTGCCATTCTGTCTTTCTG
TCACTTACTCTTTTCCCCAATCCTTCTGCTCACATCTCATTCTTTCTTCTCACCTTGTTCACCTCCACCC
ACCTTCTGCTGGGCTTCCAGTCTCCTTGCCTGTCAGTCTTTTTCAACTTCTTCTGAGATCCCTACTTGCT
TTTCTCTCTACCTGTCCCTAACCTGACTGCATGTTTGACCTTTGACCTTAATGATCTCCCTAACCTGCAC
CCTGCCTTTCTCTTCTGTGTATTTCCTTCTCTTCTACCGCTTGTCTATCCTTAAATTGGGCTTATTCTGA
TGTCATAATTAATTAAAAGATAATGTGTGCTCTTGTGATTCTAGATATCGAGTGTTTTTGATGATTTCAC
TGGAATGAAGCTGAGGTCATTGCAGTGCCATCACTCCTTGGGTATCGCTGTGCCTCTTTTTACCTTTCTA
TCACCTATAGCTGCATTCCTTGGTTTCAAGAGCCCTCCTAAGTGTTAAAATCCAACACCATTGTTAAGCA
TCTCTTCTGTCTCCAGATCATTTCTCCATCTTTCCAATGTGTATGCTTGTTTTGTGCCTAAAAGGGTAAT
ACTGGTCCTGTTCTTAGTTCTATCAAGATTAGGACATGCATATCTGAAAGAGCCAATTTTCAACCAACCT
AACAGAGACCTTCCCTGACTGTCACCTCATCTATCCATATAAATCTCCCCTTCAAATTCTCCACCTATCA
GCTTACGTTTAAGAGTCTTGCCATCTTCCCCACAATAAAGTTCATAATGTGGCATGTAAAAAAAAAAAAA AA

Restriction Sites: RsrII-NotI

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).

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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:	BC014721, AAH14721
RefSeq Size:	2382 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)-eicosapentaenoc 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]

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