

Product datasheet for **MG215201**

Cyp4x1 (NM_001003947) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cyp4x1 (NM_001003947) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cyp4x1
Synonyms:	A230025G20; Cyp4a28-ps; CYP1VX1; CYP_a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG215201 representing NM_001003947
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGAGGCTCCTGGCTGGAGACTCGTTGGGCGGCCCTTGCACCTGGCTTTGGTGTCTGCCTGGCGC
 TGGTGCTGATGCAGGCCATGAAGCTCTACTGCGGAGACAGCAGCTGCTGCGGACTGAGCCCTTCCC
 GGGCCTCCCGCCACTGGCTCCTGGGACACCAGAAGTTTCTTCAGGAGGATAATATGGAGACGCTTGAT
 GAGATTGTCAAAAAGCACCCCTTGTGCCTCCCCTGCTGGGTAGGGCCCTCCAGGCATTTTTCTACATCT
 ATGACCCAGACTATGCGAAGATATTTCTGAGCAGAACAGACCCAAAGATGCAGTATCTGCACCAGCTCCT
 GACTCCATGCATTGGACGAGGACTCCTGAATTTAGATGGGCCAGGTGGTTCCAACACCGCTGCCTCCTA
 ACTCCTGCATTCCATCAGGACATCTAAAACCATGTGTGGACACGATGGCCACTCTGTGAAAGTATGC
 TGGATAAATGGGAGAAGATGTGGACCACTCAGGAAACAACCATCGAGTTTTTGAACACATCAACTTGAT
 GACCCTGGACATAAATAATGAAATGTCTTTTGGCCAGGAGACCAACTGCCAGATAAACGGCACCTATGAG
 TCTTACGTGAAGCAACATTTGAACTTGGTGAATCATATCTTCTCGCTTGTACAATTTCTGGCATTATC
 ATGACATAATTTTCAAACCTCAGTCTTAAGGGCCACTGCTTCCAGGAGTTAGGCAAAGTGATACATCAATA
 CACAGAAAAGATAATCCAGGACAGAAAAGAAATCCTCAAGAATCAAGTAAAGCAGGATGACACTCAGACG
 TCTCAAATTTTTCTGGATATTGTTCTTTCTGCACAGGCTGAAGATGAACGAGCCTTCTCAGATGCTGACC
 TTCGGGCTGAGGTGAACACCTTCATGTGGGACGAGCATGATGCCTCTGCAGCTAGCATCTCCTGGCTCCT
 TTAAGTCTGGCTCTAAATCCCGAGCATCAGGACAGATGCCGGACAGAGATCAGGAGCATCTCCTGGGAGAT
 GGGTCTTCCATCACCTGGGAACAGCTGGATGAGATGTATACACCACAATGTGCATCAAGGAGACACTCC
 GCTTGATTCTCCTGTCCATCCATCTCCAGGGAGCTCAGCAAACCCCTTACCCTCCAGATGGACACTC
 ACTGCCTGCAGGTATGACTGTGGTTCTTAGTATTTGGGGTCTCCACCACAACCCTGCTGTCTGGAACGAC
 CCAAAGGTCTTTGACCCCTTGAGATTTACTAAGGAGAATTCTGATCAGAGACACCCTGTGCCTTCTAC
 CATTCTCCAGTGGTCCAAGGAACTGCATCGGGCAGCAGTTTCCATGCTGGAGCTAAAGGTGGCCATTGC
 CTTGATTCTGCTCCACTTTCAAGTAGCTCCAGACCTCACCAGGCCTCCTGCCTTCTCCAGCCACACTGTC
 CTCAGACCAAGCATGGAATCTATTTGCACCTGAAGAACTCCTTGAGTGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG215201 representing NM_001003947
 Red=Cloning site Green=Tags(s)

MEASWLETRWARPLHLALVFCLALVLMQAMKLYLRRQRLLRDLSPFPGPPAHWLLGHQKFLQEDNMETLD
 EIVKHKPCAFPCWVGPFAFFYIYDPDYAKIFLSRTDPKMQYLHQLLTPCIGRLLNLDGPRWFQHRCLL
 TPAFHQDILKPCVDTMAHSVKVMLDKWEKMWTTQETTIEVFEHINLMTLDIIMKCAFQETNCQINGTYE
 SYVKATFELGEIISRLYNFWHHHDIIFKLSPKGHCFQELGKVIHQYTEKIIQDRKKILKNQVKQDDTQT
 SQIFLDIVLSAQAEDEAFSDADLRAEVNTFMWAGHDASAASISWLLYCLALNPEHQDRCRTEIRSILGD
 GSSITWEQLDEMSYTTMCIKELRLIPPVPSISRELSKPLTLPDGHSLPAGMTVVLSIWGLHHPAVWWD
 PKVFDPLRFTKENSQRHPCAFLPFSSGPRNCIGQQFAMLELKVIAIALILLHFQVAPDLTRPPAFSSHTV
 LRPKHGIYHLKLLLEC

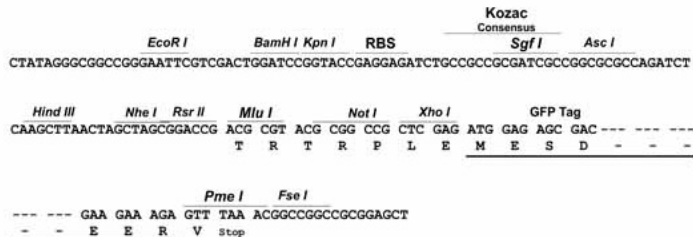
TRTRPLE - GFP Tag - V

Restriction Sites:

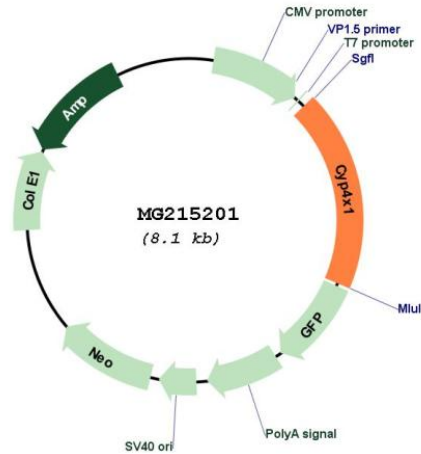
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM_001003947

ORF Size: 1521 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_001003947.2](#)

RefSeq Size: 1524 bp

RefSeq ORF: 1524 bp

Locus ID: 81906

UniProt ID: [Q6A152](#)

Cytogenetics: 4 D1

Gene Summary: A cytochrome P450 monooxygenase that selectively catalyzes the epoxidation of the last double bond of the arachidonoyl moiety of anandamide, potentially modulating endocannabinoid signaling. Has no hydroxylase activity toward various fatty acids, steroids and prostaglandins. 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). [UniProtKB/Swiss-Prot Function]