

## Product datasheet for **SC119686**

### **CYP51A1 (NM\_000786) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CYP51A1 (NM_000786) Human Untagged Clone
Tag:	Tag Free
Symbol:	CYP51A1
Synonyms:	CP51; CYP51; CYPL1; LDM; P450-14DM; P450L1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF within SC119686 sequence for NM\_000786 edited (data generated by NextGen Sequencing)

```

ATGGCGGCGGGCTGGGATGCTGCTGCTGGGCTTGTGCAGGCGGGTGGGTCCGTGCTG
GGCCAGGCGATGGAGAAGGTGACAGGCGGCAACCTCTTGCCATGCTGCTGATCGCTGC
GCCTTCACCCTCAGCCTGGTCTACCTGATCCGTCTGGCCGCCGGCCACCTGGTCCAGTG
CCCGCAGGGGTGAAAAGTCCATCCATACATTTTCTCCCAATTCCATTCCCTGGGCATCC
ATAGCATTGGGAAAAGTCCAATTGAATTTCTAGAAAATGCATATGAGAAGTATGGACCT
GTATTTAGTTTTACCATGGTAGGCAAGACATTTACTTACCTTCTGGGGAGTGATGCTGCT
GCACTGCTTTTTAATAGTAAAAATGAAGACCTGAATGCAGAAGATGTCTACAGTCGCCTG
ACAACACCTGTGTTGGGAAGGGAGTTGCATACGATGTGCCTAATCCAGTTTTCTGGAG
CAGAAGAAAATGTTAAAAAGTGGCCTTAACATAGCCACTTTAAACAGCATGTTTCTATA
ATTGAAAAGAAAACAAAGGAATACTTTGAGAGTTGGGGAGAAAAGTGGAGAAAAAATGTG
TTTGAAGCTCTTTCTGAGCTCATAATTTAACAGCTAGCCATTGTTTGCATGGAAAGGAA
ATCAGAAGTCAACTCAATGAAAAGGTAGCACAGCTGTATGCAGATTTGGATGGAGTTTC
AGCCATGCAGCCTGGCTCTTACCAGTTGGCTGCCTTTGCCTAGTTTCAGACGCAGGGAC
AGAGCTCATCGGAAATCAAGGATATTTTCTATAAGGCAATCCAGAAACGCAGACAGTCT
CAAGAAAAAATTGATGACATTCTCCAACTTTACTAGATGCTACATACAAGGATGGGCGT
CCTTTGACTGATGATGAAGTAGCAGGGATGCTTATTGGATTACTCTTGGCAGGGCAGCAT
ACATCCTCAACTACTAGTGTGGATGGGCTTCTTTTTGGCCAGAGACAAAACACTTCAA
AAAAATGTTATTTAGAACAGAAAACAGTCTGTGGAGAGAATCTGCCTCCTTTAACTTAT
GACCAGCTCAAGGATCTAAATTTACTTGATCGTGTATAAAAGAAACATTAAGACTTAGA
CCTCCTATAATGATCATGATGAGAATGGCCAGAACTCCTCAGACTGTGGCAGGGTATACC
ATTCTCCAGGACATCAGGTGTGTGTTTTCTCCACTGTCAATCAAAGACTTAAAGACTCA
TGGGTAGAACGCCTGGACTTTAATCCTGATCGCTACTTACAGGATAACCCAGCATCAGGG
GAAAAGTTTGCCTATGTGCCATTTGGAGCTGGGCGTCACCGTTGTATTGGGAAAAATTT
GCCTATGTTCAAATTAAGACAATTTGGTCCACTATGCTTCGTTTATATGAATTTGATCTC
ATTGATGGATACTTTCCCACTGTGAATTATACAATATGATTCACACCCCTGAAAACCCA
GTTATCCGTTACAAACGAAGATCAAATGA
    
```

Clone variation with respect to NM\_000786.3  
1359 t=>c

**5' Read Nucleotide Sequence:**

```

>OriGene 5' read for NM_000786 unedited
GGATTTTGAATACGACTCACTATAGGGCGGCCCGGAATTCGCACGAGGCTGCCAGCTT
CTCTCGTTCGGTCGATTTGGGAGGAGCGGTGGCGACCTCGGCTTCAGTGTTCGACGGA
GTGAATGGCGGCGGGCTGGGATGCTGCTGCTGGGCTTGCTGCAGGCGGGTGGGTCCGT
GCTGGCCAGGCGATGGAGAAGGTGACAGGCGGCAACCTCTTGCCATGCTGCTGATCGC
CTGCGCCTTCACCCTCAGCCTGGTCTACCTGATCCGTCTGGCCGCCGGCCACCTGGTCCA
GCTGCCCGCAGGGGTGAAAAGTCCATACATTTTCTCCCAATTCCATTCCCTGGGCA
TGCCATAGCATTGGGAAAAGTCCAATTGAATTTCTAGAAAATGCATATGAGAAGTATGG
ACCTGTATTTAGTTTTACCATGGTAGGCAAGACATTTACTTACCTTCTGGGGAGTGATGC
TGCTGCACTGCTTTTTAATAGTAAAAATGAAGACCTGAATGCAGAAGATGTCTACAGTCG
CCTGACAACACCTGTGTTGGGAAAGGGAGTTGCATACGATGTGCCTAATCCAGTTTTCT
TGGAGCAGAAGAAATGTTAAAAAGTGGCCTTACATAGCCACTTTAACAGCATGTTTCTA
TTATTGAAAAGAACAAGGAATCTTTGAGAGTTGGGAAGAAAAGTGAAGAAAAATGGGGT
TGAAGCTCTTCTGACTCATATTTTACAGCTAGCCATTGTTGCATGGAAAGGAATCAAAG
TCACTCATGAAAAGGTACACAGCGATGCAATTGNNGGGGGGGGGTTTAACTTGCACC
TGGCTTACCCGGTTGCTGGCTGT
    
```

**3' Read Nucleotide Sequence:** >OriGene 3' read for NM\_000786 unedited  
 GTACCGCGGGCCGCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT  
 TTTTTTTTTTTTTTCAAAAAAATTTTATTCTGAAAATTACAAAAATTTTGCCTTCCCA  
 TTTAAAGTTTAAACATGAGTCTTCCAGGGTTTAAAAAACCTGTATTTTCCCTAAGGCAA  
 ATTTTTGGGCTTCCCCTAGGGAACCAACCGATGGGGTTTTTTTTTTCACCTTCTCATT  
 AGTTGGGCCCGAGTCCAATTGGAAATAAGTGGATTCTAAACAAAAGGGGCTTTACAA  
 AAGGGGCCCATTTTTTTTTCTCCAGAGGCCCTTGTTTCAAATTTTTTTTTAAACCCAAAGT  
 TCACTGATCTCACTTTTAAAAAAGTTGGTTACCGGTTTTAATCAATTTGAGTG  
 GTACCAACCTTCCCTAATGGGATTCTAAAAAGGAACCAGGGAAGGCCAGGGGCGGGGCT  
 CATGCCTGTAATCCCACCCCTTTGGGAGGCCAAGGGGGGGGATCACAAGTTCAGGATTT  
 CAAAACACCCTACCAACTTAGGGAACCCCTGTCTTTCCTAAAAATCCAAAAATTTAC  
 CCAGCCTTGGGGGAGGGCCCTGTAATCCCAACTCCTGGGAGGCTGAGGCAAAAAATTG  
 CTTGACCCCGGGAGGCAAAGGATGCATTGACCTGAAATCGCCCCACTGCCTCTCAGCCTG  
 GGCAACAGAGCGAGACTCCTTCTCAAAAAAAGGGAAAGCAGGGGAAACACCTGA  
 GCCAAAGCAAATTATCTTAGGACTTGACTTTGGACTCCACATAAGGGGACCTTGAAA  
 ACTAAATCCTTTTTTCTAGGAAAAAATTGGTATTTTTTANAATTTGACCAAGAAGCTGGAC  
 CGCCTTACATAATAATTACATTTTTTAGGATTCTATCAATTGGCN

**Restriction Sites:** NotI-NotI  
**ACCN:** NM\_000786  
**Insert Size:** 3090 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\\_000786.2](#), [NP\\_000777.1](#)  
**RefSeq Size:** 3381 bp  
**RefSeq ORF:** 1530 bp  
**Locus ID:** 1595  
**UniProt ID:** [Q16850](#)  
**Cytogenetics:** 7q21.2  
**Domains:** p450

**Protein Families:** Druggable Genome, P450, Transmembrane

**Protein Pathways:** Metabolic pathways, Steroid biosynthesis

**Gene Summary:** This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. This endoplasmic reticulum protein participates in the synthesis of cholesterol by catalyzing the removal of the 14alpha-methyl group from lanosterol. Homologous genes are found in all three eukaryotic phyla, fungi, plants, and animals, suggesting that this is one of the oldest cytochrome P450 genes. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009]  
Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).