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# Product datasheet for SC119685

## CYP27A1 (NM_000784) Human Untagged Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | CYP27A1 (NM_000784) Human Untagged Clone |
| **Tag:** | Tag Free |
| **Symbol:** | CYP27A1 |
| **Synonyms:** | CP27; CTX; CYP27 |
| **Mammalian Cell Selection:** | None |
| **Vector:** | pCMV6-XL4 |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |



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**Fully Sequenced ORF:**

>OriGene ORF sequence for NM_000784 edited
ATCGGCACGAGGCGAGCACAACCCATGGCTGCGCTGGGCTGCGCGAGGCTGAGGTGGGCG
CTGCGAGGGGCCGGCCGTGGCCTCTGCCCCCACGGGGCCAGAGCCAAGGCCGCGATCCCT
GCCGCCCTCCCCTCGGACAAGGCCACCGGAGCTCCCGGAGCCGGGCCTGGTGTCCGGCGG
CGGCAACGGAGCTTAGAGGAGATTCCACGTCTAGGACAGCTGCGCTTCTTCTTTCAGCTG
TTCGTTCAAGGCTATGCCCTGCAACTGCACCAGTTACAGGTGCTTTACAAGGCCAAGTAC
GGTCCAATGTGGATGTCCTACTTAGGGCCTCAGATGCACGTGAACCTGGCCAGTGCCCCG
CTCTTGGAGCAAGTGATGCGGCAAGAGGGCAAGTACCCAGTACGGAACGACATGGAGCTA
TGGAAGGAGCACCGGGACCAGCACGACCTGACCTATGGGCCGTTCACCACGGAAGGACAC
CACTGGTACCAGCTGCGCCAGGCTCTGAACCAGCGGTTGCTGAAGCCAGCGGAAGCAGCG
CTCTATACGGATGCTTTCAATGAGGTGATTGATGACTTTATGACTCGACTGGACCAGCTG
CGGGCAGAGAGTGCTTCGGGGAACCAGGTGTCGGACATGGTTCAACTCTTCTACTACTTT
GCCTTGGAAGCTATTTGCTACATCCTGTTCGAGAAACGCATTGGCTGCCTGCAGCGATCC
ATCCCCGAGGACACCGTGACCTTCGTCAGATCCATCGGGTTAATGTTCCAGAACTCACTC
TATGCCACCTTCCTCCCCAAGTGGACTCGCCCCGTGCTGCCTTTCTGGAAGCGATACCTG
GATGGTTGGAATGCCATCTTTTCCTTTGGGAAGAAGCTGATTGATGAGAAGCTCGAAGAT
ATGGAGGCCCAACTGCAGGCAGCAGGGCCAGATGGCATCCAGGTGTCTGGCTACCTGCAC
TTCTTACTGGCCAGTGGACAGCTCAGTCCTCGGGAGGCCATGGGCAGCCTGCCTGAGCTG
CTCATGGCTGGAGTGGACACGACATCCAACACGCTGACATGGGCCCTGTACCACCTCTCA
AAGGACCCTGAGATCCAGGAGGCCTTGCACGAGGAAGTGGTGGGTGTGGTGCCAGCCGGG
CAAGTGCCCCAGCACAAGGACTTTGCCCACATGCCGTTGCTCAAAGCTGTGCTTAAGGAG
ACTCTGCGTCTCTACCCTGTGGTCCCCACAAACTCCCGGATCATAGAAAAGGAAATTGAA
GTTGATGGCTTCCTCTTCCCCAAGAACACCCAGTTTGTGTTCTGCCACTATGTGGTGTCC
CGGGACCCCACTGCCTTCTCTGAGCCTGAAAGCTTCCAGCCCCACCGCTGGCTGAGAAAC
AGCCAGCCTGCTACCCCCAGGATCCAGCACCCATTTGGCTCTGTGCCCTTTGGCTATGGG
GTCCGGGCCTGCCTGGGCCGCAGGATTGCAGAGCTGGAGATGCAGCTACTCCTCGCAAGG
CTGATCCAGAAGTACAAGGTGGTCCTGGCCCCGGAGACGGGGGAGTTGAAGAGTGTGGCC
CGCATTGTCCTGGTTCCCAATAAGAAAGTGGGCCTGCAGTTCCTGCAGAGACAGTGCTGA
GCTGAGTCTCCGCCTTGCTGGGGCTTGTCCTAGAGGCTCCAGCTCTGGCACAGTGGTTCC
TGGCTGCTGCCATGTCTCAGATGAGGAGGGAGAGAAGGAGGCCGCCAGACTCGAGAGGTG
GGAGGAACTCCTTGCACACACCCTGAGCTTTTGCCACTTCTATCATTTTTGAGCAACTCC
CTCTCAGCTAAAAGGCCACCCCTTTATCGCATTGCTGTCCTTGGGTAGAATATAAAATAA
AGGGACTTTTATTTTTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAC

**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM_000784 unedited
GCGGCAAAAAACATCGGCACGAGGCGAGCACAACTTATGGCTGCGCTGGGCTGCGCGAGG
CTGAGGTGGGCGCTGCGAGGGGCCGGCCGTGGCCTCTGCCCCCACGGGGCCAGAGCCAAG
GCCGCGATCCCTGCCGCCCTCCCCTCGGACAAGGCCACCGGAGCTCCCGGAGCCGGGCCT
GGTGTCCTGCTGCGGCAACGGAGCTTAGAGGATATTCCACGTCTAGGACAGCTGCGCTTC
TTCTTTCAGCTGTTCGTTCAAGGCTATGCCCTGCAACTGCACCAGTTACAGGTGCTTTAC
AAGGCCAAGTACGGTCCAATGTGGATGTCCTACTTAGGGCCTCAGATGCACGTGAACCTG
GCCAGTGCCCCGCTCTTGGAGCAAGTGATGCGGCAAGAGGGCAAGTACCCAGTACGGAAC
GACATGGAGCTATGGAAGGAGCACCGGGACCAGCACGACCTGACCTATGGGCCGTTCACC
ACGGAAGGACACCACTGGTACCAGCTGCGCCAGGCTCTGAACCAGCGGTTGCTGAAGCCA
GCGGAAGCAGCGCTCTATACGGATGCTTTCAATGAGGTGATTGATGACTTTATGACTCGA
CTGGACCAGCTGCGGGCAGAGAGTGCTTCGGGGAACCAGGTGTCGGACATGGTTCAACTC
TTCTACTACTTTGCCTTGGAAGCTATTTGCTACATCCTGTTCGAGAAACGCATTGGCTGC
CTGCAGCGATCCATCCCCGAGGACACCGTGACCTTCGTCAGATCCATCGGGTTAATGTTC
CAGAACTCACTCTATGCCACCTTCCTCCCCCAGTGGACTCGCCCCGTGCTGGCCTTTCTG
GAAGCGATACCTTGGATGGTTGGATGCCAATCTTTTCCTTTGGAAGAAGCT

**3' Read Nucleotide Sequence:**

```
>OriGene 3' read for NM_000784 unedited
TTTAGAGTCCTTTTTTTATTTCTACCCAGGGACAGCAATGCGATAAAGGGTGGCCTTTTA
GCTGAGAGGGAGTTGCTCAAAAAGATAGAAGTGGCAAAAGCTCAGGGTGTGTGCAAGGAG
TTCCTCCCACCTCTCGAGTCTGGCGGCCTCCTTCTCTCCCTCCTCATCTGAGACATGGCA
GCAGCCAGGAACCACTGTGCCAGAGCTGGAGCCTCTAGGACAAGCCCCAGCAAGGCGGAG
ACTCAGCTCAGCACTGTCTCTGCAGGAACTGCAGGCCCACTTTCTTATTGGGAACCAGGA
CAATGCGGGCCACACTCTTCAACTCCCCCGTCTCCGGGGCCAGGACCACCTTGTACTTCT
GGATCAGCCTTGCGAGGAGTAGCTGCATCTCCAGCTCTGCAATCCTGCGGCCCAGGCAGG
CCCGGACCCCATAGCCAAAGGGCACAGAGCCAAATGGGTGCTGGATCCTGGGGGTAGCAG
GCTGGCTGTTTCTCAGCCAGCGGTGGGGCTGGAAGCTTTCAGGCTCAGAGAAGGCAGTGG
GGTCCCGGGACACCACATAGTGGCAGAACACAAACTGGGTGTTCTTGGGGAAGAGGAAGC
CATCAACTTCAATTTCCTTTTCTATGATCCCGGCAGTTTGTGGGGACCACCAGGGTAGAG
ACGCAGAGTCTCCCTTTAGCACAGNCTCTGAGCAACGGCATGGGGGCCAAGTCCCTTGGG
CTGGGGGCACTTGCCCCGGCTGGCACCCCACCCACCACTTCCTCGTGCAAGGGCCTCCTG
GATCTCAAGGGTCCTCTGAGAGGTGGGACAGGGCCCCATGTCACCCTGGTGGAGGTCGTG
TCCCACTCCACCATGACCACTTCAGGCGGCCTGGCCATGGCCTCCCAGGACTGAACTGCC
CACTGCCCCTAGAAGTGCAGGGAGCAAACACCTGGATGCCACTGCCCCTCTTGCTG
```

**Restriction Sites:** NotI-NotI

**ACCN:** NM_000784

**Insert Size:** 2060 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_000784.2, NP_000775.1

**RefSeq Size:** 2059 bp

**RefSeq ORF:** 1596 bp

**Locus ID:** 1593

**UniProt ID:** Q02318

**Cytogenetics:** 2q35

**Domains:** p450

**Protein Families:** Druggable Genome, P450

**Protein Pathways:** Metabolic pathways, PPAR signaling pathway, Primary bile acid 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 mitochondrial protein oxidizes cholesterol intermediates as part of the bile synthesis pathway. Since the conversion of cholesterol to bile acids is the major route for removing cholesterol from the body, this protein is important for overall cholesterol homeostasis. Mutations in this gene cause cerebrotendinous xanthomatosis, a rare autosomal recessive lipid storage disease. [provided by RefSeq, Jul 2008]