

Product datasheet for **RG222953**

CYP27A1 (NM_000784) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | CYP27A1 (NM_000784) Human Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | CYP27A1 |
| Synonyms: | CP27; CTX; CYP27 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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ORF Nucleotide Sequence:

>RG222953 representing NM_000784
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCTGCGCTGGGCTGCGCGAGGCTGAGGTGGGCGCTGCGAGGGGCCGGCCGTGGCCTCTGCCCCACG
 GGGCCAGAGCCAAGGCCGATCCCTGCCGCCCTCCCCTCGGACAAGGCCACCGGAGCTCCCGGAGCCGG
 GCCTGGTGTCCGGCGCGGCAACGGAGCTTAGAGGAGATTCCACGTCTAGGACAGCTGCGCTTCTCTTT
 CAGCTGTTCTCAAGGCTATGCCCTGCAACTGCACAGTTACAGGTGCTTTACAAGGCCAAGTACGGTC
 CAATGTGGATGTCCTACTTAGGGCTCAGATGCACGTGAACCTGGCCAGTGCCCGCTCTTGAGCAAGT
 GATGCGGCAAGAGGGCAAGTACCCAGTACGGAACGACATGGAGCTATGGAAGGAGCACCGGGACCAGCAC
 GACCTGACCTATGGGCCGTTACCACGGAAGGACACCCTGGTACCAGCTGCGCCAGGCTCTGAACCAGC
 GGTGCTGAAGCCAGCGAAGCAGCGCTCTATACGGATGCTTCAATGAGGTGATTGATGACTTTATGAC
 TCGACTGGACCAGCTGCGGGCAGAGAGTCTTCGGGAACCAGGTGTCGGACATGGTTCAACTCTTCTAC
 TACTTTGCCTTGAAGCTATTTGCTACATCCTGTTTCGAGAAACGATTGGCTGCCTGCAGCGATCCATCC
 CCGAGGACACCGTGACCTTCGTCAGATCCATCGGGTAAATGTTCCAGAACTCACTCTATGCCACCTTCT
 CCCAAGTGGACTCGCCCGTGCTGCTTTCTGGAAGCGATACCTGGATGGTTGGAATGCCATCTTTTCC
 TTTGGGAAGAAGCTGATTGATGAGAAGCTCGAAGATATGGAGGCCAACTGCAGGCAGCAGGGCCAGATG
 GCATCCAGGTGTCTGGCTACCTGCACCTTCTACTGGCCAGTGGACAGCTCAGTCCCGGGAGGCCATGGG
 CAGCCTGCCTGAGCTGCTCATGGCTGGAGTGGACACGACATCCAACACGCTGACATGGGCCCTGTACCAC
 CTCTCAAAGGACCCTGAGATCCAGGAGGCTTGCACGAGGAAGTGGTGGTGTGGTGCCAGCCGGGCAAG
 TGCCCCAGCACAAAGGACTTTGCCACATGCCGTTGCTCAAAGCTGTGCTTAAGGAGACTTGCCTCTCTA
 CCCTGTGGTCCCCACAACTCCCGGATCATAGAAAAGGAAATGAAGTTGATGGCTTCTCTTCCCCAAG
 AACACCCAGTTTGTGTTCTGCCACTATGTGGTGTCCCGGGACCCCACTGCCTTCTCTGAGCCTGAAAGCT
 TCCAGCCCCACCGCTGGCTGAGAAAACAGCCAGCCTGCTACCCCCAGGATCCAGCACCCATTTGGCTCTGT
 GCCCTTTGGCTATGGGGTCCGGGCTGCTGGGCCGAGGATTGCAGAGCTGGAGATGCAGCTACTCCTC
 GCAAGGCTGATCCAGAAGTACAAGGTGGTCTGGCCCCGAGACGGGGAGTTGAAGAGTGTGGCCCGCA
 TTGCTCTGGTTCCCAATAAGAAAGTGGGCTGCAGTTCCTGCAGAGACAGTGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG222953 representing NM_000784
 Red=Cloning site Green=Tags(s)

MAALGCARLRWALRGAGRGLCPHGARA KAAIPAALPSDKATGAPGAGPGVRRRQRSL E EIPRLGQLRFFF
 QLFVQGYALQLHQLQVLYKAKYGPMWMSYLGPMHVN LASAPLLEQVMRQEGKYPVRNDMELWKEHRDQ
 DLTYGPF TTEGHHWYQLRQALNQRLKPAE AALYTDAFNEVIDDFMTRLDQLRAESASGNQVSDMVQLFY
 YFALEAICYILFEKRIGCLQRSIPEDTVTFVRSIGLMFQNSLYATFLPKWTRPVLPFWKRYLDGWN AIFS
 FGKKLIDEKLEDMEAQLQAAGPDGIQVSGYLHFL LASGQLSPREAMGSLPELLMAGVD TTSNTL TWALYH
 LSKDPEIQEALHEEVGVVPAGQVPQHKDFAHMPLLKAVLKETLRLYPVVPTNSRIIEKEIEVDGFLFPK
 NTQFVVFCHYVSRDPTAFSEPE SFQPHRWLRNSQPATPRIQHPFGSV PFGYVRACLGRRIA ELEMQLLL
 ARLIQKYKVV LAPETGELKSVARIVLVPNKVGLQFLQRQC

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_000784

ORF Size: 1593 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_000784.2](#), [NP_000775.1](#)

RefSeq Size: 2059 bp

RefSeq ORF: 1596 bp

Locus ID: 1593

UniProt ID: [Q02318](#)

Cytogenetics: 2q35

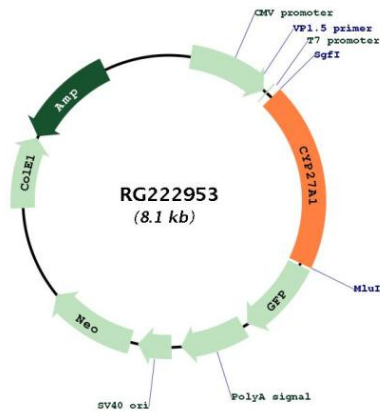
Domains: p450

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]

Product images:



Circular map for RG222953