

Product datasheet for **SC322548**

CYP1A1 (NM_000499) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CYP1A1 (NM_000499) Human Untagged Clone
Tag:	Tag Free
Symbol:	CYP1A1
Synonyms:	AHH; AHRR; CP11; CYP1; CYP1A1; P1-450; P450-C; P450DX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

Fully Sequenced ORF:

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>OriGene sequence for SC322548
GTGATCCCAGGCTCCAAGAGTCCACCCTTCCCAGCTCAGCTCAGTACCTCAGCAGCCACC
TCCAAGATCCCTACACTGATCATGCTTTTCCCAATCTCCATGTCGGCCACGGAGTTTCTT
CTGGCCTCTGTATCTTCTGTCTGGTATTCTGGTAATCAGGGCCTCAAGACCTCAGGTC
CCCAAAGGCCTGAAGAATCCACCAGGGCCATGGGGCTGGCCTCTGATTGGGCACATGCTG
ACCTGGGAAAAGAACCCGCACCTGGCACTGTCAAGGATGAGCCAGCAGTATGGGGACGTG
CTGCAGATCCGAATTGGTCCACACCCCGTGGTGGTGTGAGCGGCCTGGACACCATCCGG
CAGGCCCTGGTGCGGCAGGGCGATGATTTCAAGGGCCGGCCGACCTCTACACCTTCACC
CTCATCAGTAATGGTCAGAGCATGTCCTTCAGCCAGACTCTGGACCAAGTGTGGGCTGCC
CGCCGGCGCCTGGCCAGAATGGCCTGAAAAGTTTCTCCATTGCCTCTGACCCAGCCTCC
TCAACCTCCTGCTACCTGGAAGAGCATGTGAGCAAGGAGGCTGAGGTCCTGATAAGCAG
TTGCAGGAGCTGATGGCAGGGCCTGGGCACTTTAACCCCTACAGGTATGTGGTGGTATCA
GTGACCAATGTCATCTGTGCCATTTGCTTTGGCCGGCGCTATGACCACAACCACCAAGAA
CTGCTTAGCCTAGTCAACCTGAATAATAATTTCCGGGAGGTGGTGGCTCTGGAAACCCA
GCTGACTTCATCCCTATTCTTCGCTACCTACCCAACCCTTCCCTGAATGCCTTCAAGGAC
CTGAATGAGAAGTTCTACAGCTTCATGCAGAAGATGGTCAAGGAGCACTACAAAACCTTT
GAGAAGGGCCACATCCGGGACATCACAGACAGCCTGATTGAGCACTGTCAGGAGAAGCAG
CTGGATGAGAACGCCAATGTCCAGCTGTGAGATGAGAAGATCATTAACATCGTCTTGGAC
CTCTTTGGAGCTGGGTTTGACACAGTCACAAGTCTATCTCCTGGAGCCTCATGATTTG
GTGATGAACCCAGGGTACAGAGAAAGATCCAAGAGGAGCTAGACACAGTATTGGCAGG
TCACGGCGGCCCGGCTCTGTGACAGATCCCATCTGCCATATGAGGAGCCTTATCCTG
GAGACCTCCGACACTTTCCTTCGTCCCCTTACCATCCCCACAGCACAAACAGAGAC
ACAAGTTTGAAGGCTTTTACATCCCCAAGGGCGTTGTGTCTTTGTAACCAGTGGCAG
ATCAACCATGACCAGAAGCTATGGGTCAACCCATCTGAGTTCCTACCTGAACGGTTTCTC
ACCCCTGATGGTCTATCGACAAGGTGTTAAGTGAAGAAGTGATTATCTTTGGCATGGGC
AAGCGGAAGTGTATCGGTGAGACCATTGCCCGCTGGGAGGTCTTCTCTTCTGGCTATC
CTGCTGCAACGGGTGGAATTCAGCGTGCCACTGGGCGTGAAGGTGGACATGACCCCCATC
TATGGGCTAACCATGAAGCATGCCTGCTGTGAGCACTTCCAAATGCAGCTGCGCTCTTAG
GTGCTTGAGAGCCCTGAGGCCTAGACTCTGTCTACCTGGTCTGGTTGGGCAGCCAGACCA
GCAGGCTGGCCTATGTGGTCTAAGGTTCCAGCCTGAAACTCATAGACACTGATCTGGCTGC
AGTTTTGTATCTGGGCTGTGGCAAGCCTAAGGGATCCTGCCTGCCCTACCCTGGACT
TGCTCTGCACACCCCTCCAGAGACAACAGGTAACAGGGCCACATAGATGCTGATGGAG
CCTTCCCAAGTTGTGCTTGAGCCAGGAGCCTGCTAGGGTTAGGAGGTCCTTAGGCCTCT
GAGAAGCTCTGAAGAAGTCTCTGGAAGCCCTGGGCCAGTACCTAGCTGGCTCTGTGAG
GGTGTGACTGGCTTCAGCAAGTTAGAAGTACGCAAAACAGGACCTGTCCAATCTTTGA
CAATTGGGAGCTGCCAAGAGTGAAGGGAAGAGACAGCCAGGATACTGGCACAGAGGTAG
TCTCACTGCTTGAAGTAGGCTGAGCAATCTGACCCTATGGGTCTAGGACACAGTTCCTGG
GAACATCACATTCCTCTGCCCTTCTGCAGGCAGGAACAACAGGGCTGCCTTCTGGCCT
TGTAAGACCCTTATTGCTGTCTGGAGGGGCTGGGGACTTGTGTCTGCGGGGATCAGAGC
GCACAGGGAGTGCACATATCCAGGCACAGGACTAGGGCTGGAGTGAGGGGGGGGTATTT
CAATTACCTTCTATTGGTCTCCCTTCTCTACACTCTTGAATAAAAATGTCTATTTTTAAT
GTTTGTACACAACAATCCTTCTATTCTAGCCTGCATTGAGCTTGCATGCTTGCATAAGAG
CTTAAGAACCATTGATTTAATGTAATAGGGAAAATTCTAACCCAGGTATCCAAAATGTG
TAAGAACAACCTGAGCTAAATAAAGATATTGTTTCAGAAATCCTAAAAAAAAAAAAA
AAAAAA
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Restriction Sites:

Please inquire

ACCN:

NM_000499

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_000499.2](#), [NP_000490.1](#)

RefSeq Size: 2602 bp

RefSeq ORF: 1539 bp

Locus ID: 1543

UniProt ID: [P04798](#)

Cytogenetics: 15q24.1

Domains: p450

Protein Families: Druggable Genome, P450, Transmembrane

Protein Pathways: Metabolism of xenobiotics by cytochrome P450, Retinol metabolism, Tryptophan metabolism

Gene Summary:

This gene, CYP1A1, 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 protein localizes to the endoplasmic reticulum and its expression is induced by some polycyclic aromatic hydrocarbons (PAHs), some of which are found in cigarette smoke. The enzyme's endogenous substrate is unknown; however, it is able to metabolize some PAHs to carcinogenic intermediates. The gene has been associated with lung cancer risk. A related family member, CYP1A2, is located approximately 25 kb away from CYP1A1 on chromosome 15. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jan 2016]

Transcript Variant: This variant (1) encodes the longest isoform (1). Variants 1 and 3 encode the same isoform (1). Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.