

## Product datasheet for **RC205760**

### **CYP1A1 (NM\_000499) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CYP1A1 (NM_000499) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CYP1A1
Synonyms:	AHH; AHRR; CP11; CYP1; CYP1A1; P1-450; P450-C; P450DX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC205760 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCTTTTCCAATCTCCATGTGCGCCACGGAGTTTCTTCTGGCCTCTGTATCTTCTGTCTGGTATTCT  
 GGGTAATCAGGGCCTCAAGACCTCAGGTCCCCAAGGCCTGAAGAATCCACCAGGGCCATGGGGCTGGCC  
 TCTGATTGGGCACATGCTGACCTGGGAAAGAACCCGCACCTGGCACTGTCAAGGATGAGCCAGCAGTAT  
 GGGGACGTGCTGCAGATCCGAATTGGCTCCACACCCGTGGTGGTCTGAGCGGCCTGGACACCATCCGGC  
 AGGCCCTGGTGGCAGGGCGATGATTTCAAGGGCCGGCCGACCTCTACACCTTACCCTCATCAGTAA  
 TGGTCAGAGCATGCTCTCAGCCAGACTCTGGACCAGTGTGGGCTGCCCGCGGCCTGGCCAGAAT  
 GGCCTGAAAAGTTTCTCCATTGCCTCTGACCCAGCCTCCTCAACCTCTGCTACCTGGAAGAGCATGTGA  
 GCAAGGAGGCTGAGGTCCTGATAAGCACGTTGCAGGAGCTGATGGCAGGGCCTGGCACTTAAACCCTA  
 CAGGTATGTGGTGTATCAGTGACCAATGTCATCTGTGCCATTTGCTTTGGCCGGCGCTATGACCACAAC  
 CACCAAGAACTGCTTAGCCTAGTCAACCTGAATAATAATTTCCGGGAGGTTGGTCTGGAAACCCAG  
 CTGACTTCATCCCTATTCTTCGCTACCTACCAACCCCTCCCTGAATGCCTTCAAGGACCTGAATGAGAA  
 GTTCTACAGCTTCATGCAGAAGATGGTCAAGGAGCACTACAAAACCTTTGAGAAGGGCCACATCCGGGAC  
 ATCAGAGACAGCCTGATTGAGCACTGTCAGGAGAAGCAGCTGGATGAGAACGCCAATGTCCAGCTGTGAG  
 ATGAGAAGATCATTAAATCGTCTTGGACCTCTTTGGAGCTGGGTTTGACACAGTCACAACTGCTATCTC  
 CTGGAGCCTCATGATTTTGGTGTGAACCCAGGGTACAGAGAAAGATCCAAGAGGAGCTAGACACAGTG  
 ATTGGCAGGTACGGCGGCCCGGCTCTCTGACAGATCCCATCTGCCCTATATGGAGGCCTTCATCCTGG  
 AGACCTTCCGACACTCTCCTTCGTCCTCCCTTACCATCCCCACAGCACAAACAAGAGACACAAGTTTGAA  
 AGGCTTTTACATCCCAAGGGCGTTGTGTCTTTGTAACCAGTGGCAGATCAACCATGACCAGAAAGCTA  
 TGGGTCAACCCATCTGAGTTCCTACCTGAACGGTTTCTCACCCCTGATGGTGTATCGACAAAGGTGTTAA  
 GTGAGAAGGTGATTATCTTTGGCATGGGCAAGCGGAAGTGTATCGGTGAGACCATTGCCCGCTGGGAGGT  
 CTTTCTCTTCTGGCTATCTGCTGCAACGGGTGGAATTCAGCGTGCCACTGGGCGTGAAGGTGGACATG  
 ACCCCATCTATGGGCTAACCATGAAGCATGCCTGCTGTGAGCACTTCCAATGCAGCTGCGCTCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC205760 protein sequence  
 Red=Cloning site Green=Tags(s)

MLFPISMSATEFLLASVIFCLVFWVIRASRPQVPKGLKNPPGPWGWP LIGHMLTLGKNPHLALSRMSQQY  
 GDVLQIRIGSTPVVVL SGLDIRQALVRQGDDFKGRPDLYFTFLISNGQSMSFSPDSGPVWAARRRRLAQN  
 GLKSFSIASDPASSTSCYLEEHVSKEAEVLISTLQELMAGPGHFNPYRYVVVSVTNVICAICFGRRYDHN  
 HQELLSLVNLN NFGEVVGSGNPADFIPILRYLPNPSLNAFKDLNEKFYSFMQKMKVKEHYKTFEKGHIRD  
 ITDSLIEHCQEKQLDENANVQLSDEKIINIVLDFGAGFDVTTAISWSLMYLVMNPRVQRKIQEELDTV  
 IGRSRRPRLSDRSHLPYMEAFIETFRHSSFVPFTIPHSTTRDTSLKGFYIPKGRCVFVNQWQINHDQKL  
 WVNPFSEFLPERFLTPDGAIDKVLSEKVIIFGMGRKCIGETIARWEVFLFLAILLQRVEFSVPLGVKVD  
 MTPYIYGLTMKHACCEHFQMLRS

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6015\\_a10.zip](https://cdn.origene.com/chromatograms/mk6015_a10.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

**ACCN:** NM\_000499

**ORF Size:** 1536 bp

**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](mailto: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](#)

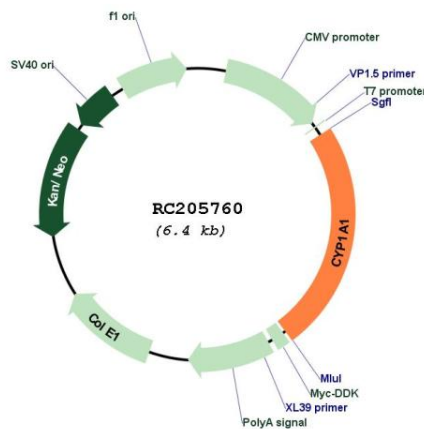
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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).

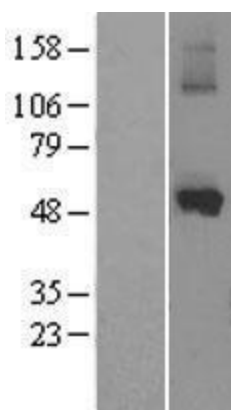
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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:	<a href="#">NM_000499.5</a>
RefSeq Size:	2608 bp
RefSeq ORF:	1539 bp
Locus ID:	1543
UniProt ID:	<a href="#">P04798</a>
Cytogenetics:	15q24.1
Domains:	p450
Protein Families:	Druggable Genome, P450, Transmembrane
Protein Pathways:	Metabolism of xenobiotics by cytochrome P450, Retinol metabolism, Tryptophan metabolism
MW:	58.2 kDa
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]

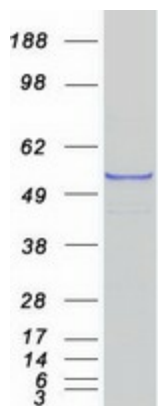
### Product images:



Circular map for RC205760



Western blot validation of overexpression lysate (Cat# [LY400170]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205760 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CYP1A1 protein (Cat# [TP305760]). The protein was produced from HEK293T cells transfected with CYP1A1 cDNA clone (Cat# RC205760) using MegaTran 2.0 (Cat# [TT210002]).