

Product datasheet for **RC205760**

CYP1A1 (NM_000499) Human Tagged ORF Clone

Product data:

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|---------------------------|-------------------------------------------------------|
| 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**

ATGCTTTTCCCAATCTCCATGTGCGCCACGGAGTTTCTTCTGGCCTCTGTATCTTCTGTCTGGTATTCT
 GGGTAATCAGGGCCTCAAGACCTCAGGTCCCCAAGGCCTGAAGAATCCACCAGGGCCATGGGGCTGGCC
 TCTGATTGGGCACATGCTGACCTGGGAAAGAACCCGCACCTGGCACTGTCAAGGATGAGCCAGCAGTAT
 GGGGACGTGCTGCAGATCCGAATTGGCTCCACACCCGTGGTGGTCTGAGCGGCCTGGACACCATCCGGC
 AGGCCCTGGTGGCAGGGCGATGATTTCAAGGGCCGGCCGACCTCTACACCTTACCCTCATCAGTAA
 TGGTCAGAGCATGCTCTCAGCCAGACTCTGGACCAGTGTGGGCTGCCCGCGGCCTGGCCAGAAT
 GGCCTGAAAAGTTTCTCCATTGCCTCTGACCCAGCCTCCTCAACCTCTGCTACCTGGAAGAGCATGTGA
 GCAAGGAGGCTGAGGTCCTGATAAGCACGTTGCAGGAGCTGATGGCAGGGCCTGGCACTTAAACCCTA
 CAGGTATGTGGTGTATCAGTGACCAATGTCATCTGTGCCATTTGCTTTGGCCGGCGCTATGACCACAAC
 CACCAAGAACTGCTTAGCCTAGTCAACCTGAATAATAATTTCCGGGAGGTTGGTCTGGAAACCCAG
 CTGACTTCATCCCTATTCTTCGCTACCTACCAACCCCTCCCTGAATGCCTTCAAGGACCTGAATGAGAA
 GTTCTACAGCTTCATGCAGAAGATGGTCAAGGAGCACTACAAAACCTTTGAGAAGGGCCACATCCGGGAC
 ATCACAGACAGCCTGATTGAGCACTGTCAGGAGAAGCAGCTGGATGAGAACGCCAATGTCAGCTGTGAG
 ATGAGAAGATCATTAAATCGTCTTGGACCTCTTTGGAGCTGGGTTTGACACAGTCACAACTGCTATCTC
 CTGGAGCCTCATGATTTGGTGTGAACCCAGGTTACAGAGAAAGATCCAAGAGGAGCTAGACACAGTG
 ATTGGCAGGTACGGCGGCCCGGCTCTCTGACAGATCCCATCTGCCCTATATGGAGGCCTTCATCCTGG
 AGACCTTCCGACACTCTCCTTCGTCCTCCCTTACCATCCCCACAGCACAAACAAGAGACACAAGTTTGAA
 AGGCTTTTACATCCCAAGGGCGTTGTGTCTTTGTAACCAGTGGCAGATCAACCATGACCAGAAAGCTA
 TGGGTCAACCCATCTGAGTTCCTACCTGAACGTTTCTCACCCCTGATGGTGTATCGACAAAGGTGTTAA
 GTGAGAAGGTGATTATCTTTGGCATGGGCAAGCGGAAGTGTATCGGTGAGACCATTGCCCGCTGGGAGGT
 CTTTCTCTTCTGGCTATCTGCTGCAACGGGTGGAATTCAGCGTGCCACTGGGCGTGAAGGTGGACATG
 ACCCCATCTATGGGCTAACCATGAAGCATGCCTGCTGTGAGCACTTCCAATGCAGCTGCGCTCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

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

MLFPISMSATEFLLASVIFCLVFWVIRASRPQVPKGLKNPPGPWGWLIGHMLTLGKNPHLALSRMSQQY
 GDVLQIRIGSTPVVVL SGLDIRQALVRQDDFKGRPDLYFTLISNGQSMFSPDSGPVWAARRRLAQN
 GLKSFSIASDPASSTSCYLEEHVSKEAEVLISTLQELMAGPGHFNRYRYVVSVTNVICAICFGRRYDHN
 HQELLSLVNLNFFGEVVGSGNPADFIPILRYLPNPSLNAFKDLNEKFYSFMQKMKVKEHYKTFEKGHIRD
 ITDSLIEHCQEKQLDENANVQLSDEKIINIVLDFGAGFDVTTAISWSLMYLVMNPRVQRKIQEELDTV
 IGRSRRPRLSDRSHLPYMEAFIETFRHSSFPVFTIPHSTTRDTSKGFYIPKGRCVFVNQWQINHDQKL
 WVNPFSEFLPERFLTPDGAIDKVLSEKVIIFGMGRKCIGETIARWEVFLFLAILLQRVEFSVPLGVKVD
 MTPYIYGLTMKHACCEHFQMLRS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

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 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](#)

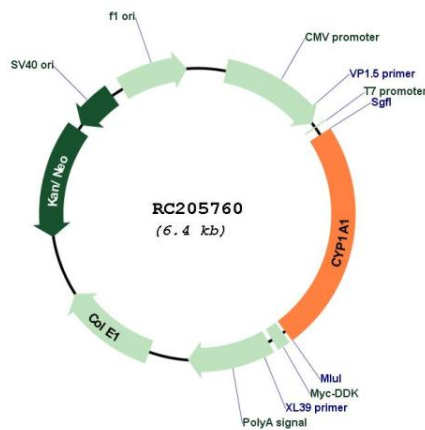
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

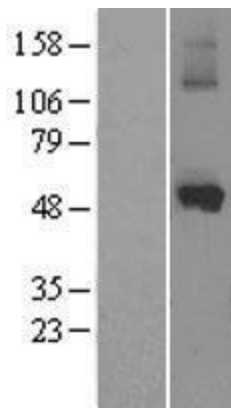
- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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.

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| Note: | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required. |
| RefSeq: | NM_000499.5 |
| RefSeq Size: | 2608 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 |
| 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] |

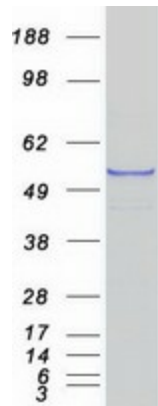
Product images:



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]).