

Product datasheet for **RG205760**

CYP1A1 (NM_000499) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CYP1A1 (NM_000499) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CYP1A1
Synonyms:	AHH; AHRR; CP11; CYP1; CYP1A1; P1-450; P450-C; P450DX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG205760 representing NM_000499
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTTTTCCAATCTCCATGTCGGCCACGGAGTTTCTTCTGGCCTCTGTATCTTCTGTCTGGTATTCT
 GGGTAATCAGGGCCTCAAGACCTCAGGTCCCCAAAGGCCTGAAGAATCCACCAGGGCCATGGGGCTGGCC
 TCTGATTGGGCACATGCTGACCTGGGAAAGAACCCGCACCTGGCACTGTCAAGGATGAGCCAGCAGTAT
 GGGGACGTGCTGCAGATCCGAATTGGCTCCACACCCCGTGGTGGTCTGAGCGGCCTGGACACCATCCGGC
 AGGCCCTGGTGGCAGGGCGATGATTTCAAGGGCCGGCCGACCTCTACACCTTACCCTCATCAGTAA
 TGGTCAGAGCATGTCCTCAGCCAGACTCTGGACCAGTGTGGGCTGCCCGCCGGCGCCTGGCCAGAAT
 GGCCTGAAAAGTTTCTCCATTGCCTCTGACCCAGCCTCCTCAACCTCTGCTACCTGGAAGAGCATGTGA
 GCAAGGAGGCTGAGGTCCTGATAAGCACGTTGCAGGAGCTGATGGCAGGGCCTGGGCACTTAACCCCTA
 CAGGTATGTGGTGTATCAGTGACCAATGTCATCTGTGCCATTTGCTTTGGCCGGCGCTATGACCACAAC
 CACCAAGAACTGCTTAGCCTAGTCAACCTGAATAATAATTTGGGGAGGTGGTTGGCTCTGGAAACCCAG
 CTGACTTCATCCCTATTCTTCGCTACCTACCCAACCCCTCCCTGAATGCCTTCAAGGACCTGAATGAGAA
 GTTCTACAGCTTCATGCAGAAGATGGTCAAGGAGCACTACAAAACCTTTGAGAAGGGCCACATCCGGGAC
 ATCACAGACAGCCTGATTGAGCACTGTCAGGAGAAGCAGCTGGATGAGAACGCCAATGTCCAGCTGTGAG
 ATGAGAAGATCATTAAACATCGTCTTGGACCTCTTTGGAGCTGGGTTTGACACAGTCACAACTGCTATCTC
 CTGGAGCCTCATGATTTTGGTGTGAACCCAGGGTACAGAGAAAGATCCAAGAGGAGCTAGACACAGTG
 ATTGGCAGGTACGGCGGCCCGGCTCTCTGACAGATCCCATCTGCCCTATATGGAGGCCCTCATCCTGG
 AGACCTTCCGACACTCTCCTTCGTCCTCCCTTACCATCCCCACAGCACAAACAAGAGACACAAGTTTGG
 AGGCTTTTACATCCCCAAGGGGCGTTGTGTCTTTGTAACCAGTGGCAGATCAACCATGACCAGAAGCTA
 TGGGTCAACCCATCTGAGTTCCTACCTGAACGTTTCTCACCCCTGATGGTGTATCGACAAAGGTGTTAA
 GTGAGAAGGTGATTATCTTTGGCATGGGCAAGCGGAAGTGTATCGGTGAGACCATTGCCCGCTGGGAGGT
 CTTTCTCTTCTGGCTATCTGCTGCAACGGGTGGAATTCAGCGTGCCACTGGGCGTGAAGGTGGACATG
 ACCCCATCTATGGGCTAACCATGAAGCATGCCTGCTGTGAGCACTTCCAATGCAGCTGCGCTCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG205760 representing NM_000499
 Red=Cloning site Green=Tags(s)

MLFPISMSATEFLLASVIFCLVFWVIRASRPQVPKGLKNPPGPWGWP LIGHMLTLGKNPHLALSRMSQQY
 GDVLRIRIGSTPVVVL SGLDTRQALVRQGDDFKGRPDLYTFTLISNGQSMSFSPDSGPVWAARRRLAQN
 GLKSFASIASDPASSTSCYLEEHVSKEAEVLISTLQELMAGPGHFNPYRYVVVSVTVNICAICFGRRYDHN
 HQELLSLVNLNNNFGEVVGSGNPADFIPILRYPNPSLNAFKDLNEKFYSFMQKMKVKEHYKTFEKHIRD
 ITDSLIEHCQEKQLDENANVQLSDEKIIINIVLDLFGAGFDVTTAISWSLMYLVMNPRVQRKIQEELDTV
 IGRSRRPRLSDRSHLPYMEAFIETFRHSSFVPFTIPHSTTRDTSLKGFYIPKGRCVFVNQWQINHDQKL
 WVNPFSEFLPERFLTPDGAIDKVLSEKVIIFGMGKRKCIGETIARWEVFLFLAILLQRVEFSVPLGVKVDM
 TPIYGLTMKHACCEHFQMLRS

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

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.

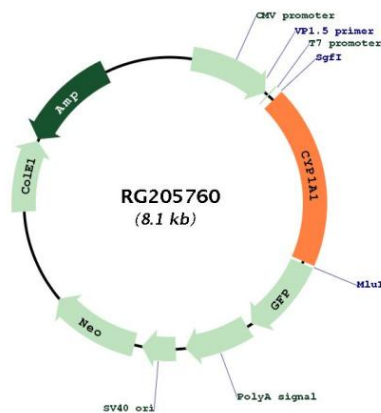
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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.

RefSeq: [NM_000499.5](#)

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]

Product images:



Circular map for RG205760