

## Product datasheet for **RC210170**

### Cytochrome P450 3A4 (CYP3A4) (NM\_017460) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cytochrome P450 3A4 (CYP3A4) (NM_017460) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cytochrome P450 3A4
Synonyms:	CP33; CP34; CYP3A; CYP3A3; CYP11A3; CYP11A4; HLP; NF-25; P450C3; P450PCN1; VDDR3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC210170 representing NM\_017460  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTCTCATCCAGACTTGGCCATGGAACCTGGCTTCTCCTGGCTGTCAGCCTGGTCTCTCTATC  
 TATATGGAACCCATTACATGGACTTTTTAAGAAGCTTGAATTCAGGGCCACACCTCTGCCTTTTTT  
 GGGAAATATTTTGTCTACCATAAGGGCTTTTGTATGTTTGACATGGAATGCATAAAAAAGTATGAAAA  
 GTGTGGGGCTTTTATGATGGTCAACAGCCTGTGCTGGCTATCACAGATCCTGACATGATCAAAACAGTGC  
 TAGTGAAGAATGTTATTCTGTCTTACAAACCGGAGGCCTTTGGTCCAGTGGGATTTATGAAAAGTGC  
 CATCTCTATAGCTGAGGATGAAGAATGGAAGAGATTACGATCATTGCTGTCTCCAACCTTACCAGTGA  
 AAACCAAGGAGATGGTCCCTATCATTGCCAGTATGGAGATGTGTTGGTGAAGAACTGAGGCGGGAAG  
 CAGAGACAGGCAAGCCTGTACCTTGAAGACGTCTTTGGGCCCTACAGCATGGATGTGATCACTAGCAC  
 ATCATTTGGAGTGAACATCGACTCTCTCAACAATCCACAAGACCCTTTGTGAAAAACCAAGAAGCTT  
 TTAAGATTTGATTTTTTGGATCCATTCTTCTCTCAATAACAGTCTTCCATTCCCTATCCCAATCTTG  
 AAGTATTAATATCTGTGTGTTTCCAAGAGAAGTTACAAATTTTTTAAGAAAATCTGTAAGAAAGGATGAA  
 AGAAAAGTCGCCTCGAAGATACACAAAAGCACCGAGTGGATTTCCCTCAGCTGATGATTGACTCTCAGAAT  
 TCAAAAAGAACTGAGTCCACAAAGCTCTGTCCGATCTGGAGCTCGTGGCCCAATCAATTATCTTTATTT  
 TTGCTGGCTATGAAACCACGAGCAGTGTCTCTCCTTATTATGTATGAAGTGGCCACTCACCTGATGT  
 CCAGCAGAACTGCAGGAGGAAATTGATGCAGTTTTACCAATAAGGCACCACCCACCTATGATACTGTG  
 CTACAGATGGAGTATCTTGACATGGTGGTGAATGAAACGCTCAGATTATCCCAATTGCTATGAGACTTG  
 AGAGGGTCTGCAAAAAGATGTTGAGATCAATGGGATGTTCAATCCCAAGGGGTGGTGGTATGATTCC  
 AAGCTATGCTCTTACCCTGACCCAAAGTACTGGACAGAGCCTGAGAAGTTCTCCCTGAAAGATTCAGC  
 AAGAAGAACAAGGACAACATAGATCCTTACATATACACACCCTTTGGAAGTGGACCCAGAAACTGCATTG  
 GCATGAGGTTTGTCTCATGAACATGAACTTGTCTAATCAGAGTCTTCAAGACTTCTCCTTCAAACC  
 TTGTAAGAAACACAGATCCCCCTGAAATTAAGCTTAGGAGGACTTCTTCAACCAGAAAAACCCGTGTT  
 CTAAGGTTGAGTCAAGGGATGGCACCGTAAGTGGAGCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC210170 representing NM\_017460  
 Red=Cloning site Green=Tags(s)

MALIPDLAMETWLLLAVSLVLLYLYGTHSHGLFKKLGIPGPTPLPFLGNILSYHKGFCMFDMECHKKYGK  
 VWGFYDQQPVLAITDPDMIKTVLVKECYSVFTNRRPFGPVGFMKSAISIAEDEEWKRLRSLLSPTFTSG  
 KLKEMVPIIAQYGDVLRNLRREAETGKPVTLKDVFGAYSMDVITSTSGVNIIDSLNPNQDPFVENTKLL  
 LRFDFLDPFFLSITVFPFLIPILEVLNICVFPREVTFNLRKSVKRMKESRLEDQKHRVDFLQLMIDSQN  
 SKETESHKALSDELVAQSIIFIFAGYETTSSVLSFIMYELATHPDVQKQLQEEIDAVLPNKAPPTYDTV  
 LQMEYLDMMVNETLRLFP IAMRLERVCKKDVEINGMFIKGVVVMIPSYALHRDPKYWTEPEKFLPERFS  
 KKNKDNIDPYIYTPFGSGPRNCIGMRFALMNMKLALIRVLQNF SFKPKETQIPLKLSLGGLLQPEKPVV  
 LKVESRDGTVSGA

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mg4152\\_c01.zip](https://cdn.origene.com/chromatograms/mg4152_c01.zip)

**Restriction Sites:**

Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_017460

ORF Size: 1509 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](#)

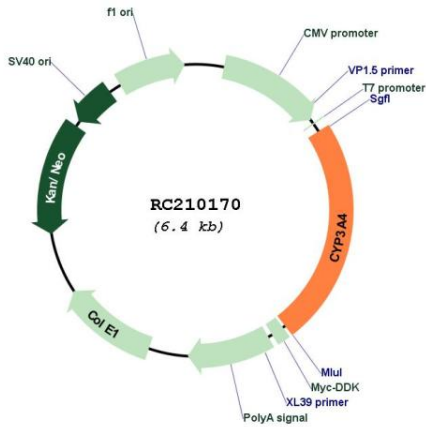
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

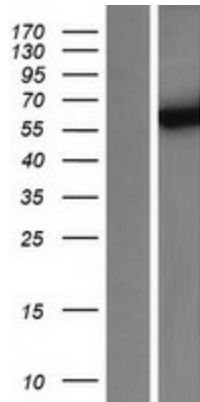
- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the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

<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_017460.6</a>
<b>RefSeq Size:</b>	2768 bp
<b>RefSeq ORF:</b>	1512 bp
<b>Locus ID:</b>	1576
<b>UniProt ID:</b>	<a href="#">P08684</a>
<b>Cytogenetics:</b>	7q22.1
<b>Domains:</b>	p450
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, P450, Transmembrane
<b>Protein Pathways:</b>	Drug metabolism - cytochrome P450, Drug metabolism - other enzymes, Linoleic acid metabolism, Metabolic pathways, Metabolism of xenobiotics by cytochrome P450, Retinol metabolism
<b>MW:</b>	57.2 kDa
<b>Gene Summary:</b>	<p>This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases that 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 glucocorticoids and some pharmacological agents. This enzyme is involved in the metabolism of approximately half the drugs in use today, including acetaminophen, codeine, cyclosporin A, diazepam, erythromycin, and chloroquine. The enzyme also metabolizes some steroids and carcinogens. This gene is part of a cluster of cytochrome P450 genes on chromosome 7q21.1. Previously another CYP3A gene, CYP3A3, was thought to exist; however, it is now thought that this sequence represents a transcript variant of CYP3A4. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Aug 2020]</p>

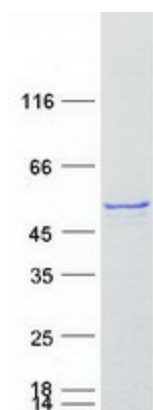
Product images:



Circular map for RC210170



Western blot validation of overexpression lysate (Cat# [LY413764]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210170 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CYP3A4 protein (Cat# [TP310170]). The protein was produced from HEK293T cells transfected with CYP3A4 cDNA clone (Cat# RC210170) using MegaTran 2.0 (Cat# [TT210002]).