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Product datasheet for SC125488

Cytochrome P450 3A4 (CYP3A4) (NM_017460) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cytochrome P450 3A4 (CYP3A4) (NM_017460) Human Untagged Clone
Tag:	Tag Free
Symbol:	Cytochrome P450 3A4
Synonyms:	CP33; CP34; CYP3A; CYP3A3; CYPIIIA3; CYPIIIA4; HLP; NF-25; P450C3; P450PCN1; VDDR3
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

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Fully Sequenced ORF:

>OriGene ORF sequence for NM_017460 edited
CGGCCGCGAATTCGGCACGAGAAGCTCCATGCACATAGCCCAGCAAAGAGCAACACAGAG
CTGAAAGGAAGACTCAGAGGAGAGAGATAAGTAAGGAAAGTAGTGATGGCTCTCATCCCA
GACTTGGCCATGGAAACCTGGCTTCTCCTGGCTGTCAGCCTGGTGCTCCTCTATCTATAT
GGAACCCATTCACATGGACTTTTTAAGAAGCTTGGAATTCCAAGGCCCACACCTCTGCCT
TTTTTGGGAAATATTTTGTCCTACCATAAGGGCTTTTGTATGTTTGACATGGAATGTCAT
AAAAAGTATGGAAAAGTGTGGGGCTTTTATGATGGTCAACAGCCTGTGCTGGCTATCACA
GATCCTGACATGATCAAAACAGTGCTAGTGAAAGAATGTTATTCTGTCTTCACAAACCGG
AGGCCTTTTGGTCCAGTGGGATTTATGAAAAGTGCCATCTCTATAGCTGAGGATGAAGAA
TGGAAGAGATTACGATCATTGCTGTCTCCAACCTTCACCAGTGGAAAACTCAAGGAGATG
GTCCCTATCATTGCCCAGTATGGAGATGTGTTGGTGAGAAATCTGAGGCGGGAAGCAGAG
ACAGGCAAGCCTGTCACCTTGAAAGACGTCTTTGGGGCCTACAGCATGGATGTGATCACT
AGCACATCATTTGGAGTGAACATCGACTCTCTCAACAATCCACAAGACCCCTTTGTGGAA
AACACCAAGAAGCTTTTAAGATTTGATTTTTTGGATCCATTCTTTCTCTCAATAACAGTC
TTTCCATTCCTCATCCCAATTCTTGAAGTATTAAATATCTGTGTGTTTCCAAGAGAAGTT
ACAAATTTTTTAAGAAAATCTGTAAAAAGGATGAAAGAAAGTCGCCTCGAAGATACACAA
AAGCACCGAGTGGATTTCCTTCAGCTGATGATTGACTCTCAGAATTCAAAAGAAACTGAG
TCCCACAAAGCTCTGTCCGATCTGGAGCTCGTGGCCCAATCAATTATCTTTATTTTTGCT
GGCTATGAAACCACGAGCAGTGTTCTCTCCTTCATTATGTATGAACTGGCCACTCACCCT
GATGTCCAGCAGAAACTGCAGGAGGAAATTGATGCAGTTTTACCCAATAAGGCACCACCC
ACCTATGATACTGTGCTACAGATGGAGTATCTTGACATGGTGGTGAATGAAACGCTCAGA
TTATTCCCAATTGCTATGAGACTTGAGAGGGTCTGCAAAAAAGATGTTGAGATCAATGGG
ATGTTCATTCCCAAAGGGGTGGTGGTGATGATTCCAAGCTATGCTCTTCACCGTGACCCA
AAGTACTGGACAGAGCCTGAGAAGTTCCTCCCTGAAAGATTCAGCAAGAAGAACAAGGAC
AACATAGATCCTTACATATACACACCCTTTGGAAGTGGACCCAGAAACTGCATTGGCATG
AGGTTTGCTCTCATGAACATGAAACTTGCTCTAATCAGAGTCCTTCAGAACTTCTCCTTC
AAACCTTGTAAAGAAACACAGATCCCCCTGAAATTAAGCTTAGGAGGACTTCTTCAACCA
GAAAAACCCGTTGTTCTAAAGGTTGAGTCAAGGGATGGCACCGTAAGTGGAGCCTGAATT
TTCCTAAGGACTTCTGCTTTGCTCTTCAAGAAATCTGTGCCTGAGAACACCAGAGACCTC
AAATTACTTTGTGAATAGAACTCTGAAATGAAGATGGGCTTCATCCAATGGACTGCATAA
ATAACCGGGGATTCTGTACATGCATTGAGCTCTCTCATTGTCTGTGTAGAGTGTTATACT
TGGGAATATAAAGGAGGTGACCAAATCAGTGTGAGGAGGTAGATTTGGCTCCTTTGCTTC
TCACGGGACTATTTCCACCACCCCCAGTTAGCACCATTAACTCCTCCTGAGCTTTGATAA
GAGAATCAACATTTCTCAATAATTTCCTCCCCAAATTATTAATGAAAATAAGAATTATTT
TGATGGCTCTAACAATGACATTTATATCACATGTTTTCTCTGGAGTATTCTATAAGTTTT
ATGTTAAATCAATAAAGACCCCTTTTCAAAAGTAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAACTCG

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_017460 unedited
AAGTTCAAATTTGTATACGACTCATATAGGGCGGCCGCGAATTCGCACGANAAGCTCCAT
GCACATAGCCCAGCAAAAAGCAACACAGAGCTGAAAGGAAGACTCAGAGGAGAGAGATAA
GTAAGGAAAGTAGTGATGGCTCTCATCCCAGACTTGGCCATGGAAACCTGGCTTCTCCTG
GCTGTCAGCCTGGTGCTCCTCTATCTATATGGAACCCATTCACATGGACTTTTTAAGAAG
CTTGGAATTCCAAGGCCCACACCTCTGCCTTTTTTGGGAAATATTTTGTCCTACCATAAG
GGCTTTTGTATGTTTGACATGGAATGTCATAAAAAGTATGGAAAAGTGTGGGGCTTTTAT
GATGGTCAACAGCCTGTGCTGGCTATCACAGATCCTGACATGATCAAAACAGTGCTAGTG
AAAGAATGTTATTCTGTCTTCACAAACCGGAGGCCTTTTGGTCCAGTGGGATTTATGAAA
AGTGCCATCTCTATAGCTGAGGATGAAGAATGGAAGAGATTACGATCATTGCTGTCTCCA
ACCTTCACCAGTGGAAAACTCAAGGAGATGGTCCCTATCATTGCCCAGTATGGAGATGTG
TTGGTGAGAAATCTGAGGCGGGAAGCAGAGACAGGCAAGCCTGTCACCTTGAAAGACGTC
TTTGGGGCCTACAGCATGGATGTGATCACTAGCACATCATTTGGAGTGAACATCGACTCT
CTCAACAATCCACAAGACCNCTTTGTGGAAAACACCAAGAAGCTTTTAAGATTTGATTTT
TTGGATCCATTCTTTCTCTCATAACAGTCTTTCCATTCCTCATCCNNNATTCTGNAGTAT
TAAATATCTGTGTGNTTTCAAGAGAAGTTACAAATTTTTTAAGAAAATCTGTAAAAGGAT
GAAAGAAAGTCGCTCGAAGATCACN

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_017460 unedited
NNATTATTTTNACCGCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTTT
TTTTTTTTACTTTTGAAAAGGGGTCTTTATTGATTTAACATAAAACTTATAGAATACTCC
AGAGAAAACATGTGATATAAATGTCATTGTTAGAGCCATCAAAATAATTCTTATTTTCAT
TAATAATTTGGGGAGGAAATTATTGAGAAATGTTGATTCTCTTATCAAAGCTCAGGAGGA
GTTAATGGTGCTAACTGGGGGTGGTGGAAATAGTCCCGTGAGAAGCAAAGGAGCCAAATC
TACCTCCTCACACTGATTTGGTCACCTCCTTTATATTCCCAAGTATAACACTCTACACAG
ACAATGAGAGAGCTCAATGCATGTACAGAATCCCCGGTTATTTATGCAGTCCATTGGATG
AAGCCCATCTTCATTTCAGAGTTCTATTCACAAAGTAATTTGAGGTCTCTGGTGTTCTCA
GGCACAGATTTCTTGAAGAGCAAAGCAGAAGTCCTTAGGAAAATTCAGGCTCCACTTACG
GTGCCATCCCTTGACTCAACCTTTAGAACAACGGGTTTTTCTGGTTGAAGAAGTCCTCCT
AAGCTTAATTTCAGGGGGATNCTGTGTTTCTTTACAAGGTTTGAAGGAGAAGTTCTGAAG
GACTCTGATTAGAGCAAGTTTCATGTTCATGAGAGCAAACCTCATGCCAATGCAGTTTCT
GGGTCCACTTCCAAGGGTGTGTATATGTAAGGATCTATNGTGNCCTTGNTCTTCTTGCTG
AATCTTTCAGGGNAGAAACTCTCANGCTCTGTCAGTACTTTTGGTCACGGTGAAAGCATA
NCTTGGAATCATCACACCACCCCTTTGGNAATGACATCCCCATGATCTCACATCTTTTTT
GCAGACCTCTCAGTCTATAGCATTGGGAATATCTGACC

Restriction Sites: NotI-NotI

ACCN: NM_017460

Insert Size: 2150 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
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_017460.3, NP_059488.2
RefSeq Size:	2768 bp
RefSeq ORF:	1512 bp
Locus ID:	1576
UniProt ID:	P08684
Cytogenetics:	7q22.1
Domains:	p450
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, P450, Transmembrane
Protein Pathways:	Drug metabolism - cytochrome P450, Drug metabolism - other enzymes, Linoleic acid metabolism, Metabolic pathways, Metabolism of xenobiotics by cytochrome P450, Retinol metabolism

Gene Summary: 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] Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.