

Product datasheet for **RC211377**

Cytochrome p450 2C19 (CYP2C19) (NM_000769) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cytochrome p450 2C19 (CYP2C19) (NM_000769) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CYP2C19
Synonyms:	CPCJ; CYP2C; CYP11C17; CYP11C19; P450C2C; P45011C19
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RC211377 representing NM_000769
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGATCCTTTTGTGGTCTTGTGCTCTGTCTCATGTTTGCTTCTCCTTTCAATCTGGAGACAGAGCT
 CTGGGAGAGGAAAACCTCCTCGGCCACTCCTCTCCAGTGATTGGAAATATCTACAGATAGATAT
 TAAGGATGTCAGCAAATCCTTAACCAATCTCTCAAAAATCTATGGCCCTGTGTTCACTCTGTATTTTGGC
 CTGGAACGCATGGTGGTCTGCATGGATATGAAGTGGTGAAGGAAGCCCTGATTGATCTTGGAGAGGAGT
 TTTCTGGAAGAGGCCATTTCCCACTGGCTGAAAGAGCTAACAGAGGATTTGGAATCGTTTTTCAGCAATGG
 AAAGAGATGGAAGGAGATCCGGCGTTTCTCCCTCATGACGCTGCGGAATTTGGGATGGGAAGAGGAGC
 ATTGAGGACCGTGTCAAGAGGAAGCCCGCTGCCTTGTGGAGGAGTTGAGAAAAACCAAGGCTTCACCCCT
 GTGATCCCACTTTTCATCCTGGGCTGTGCTCCCTGCAATGTGATCTGCTCCATTATTTCCAGAAACGTTT
 CGATTATAAAGATCAGCAATTTCTTAACCTTGATGGAAAAATTGAATGAAAACATCAGGATTGTAAGCACC
 CCCTGGATCCAGATATGCAATAATTTCCCACTATCATTGATTATTTCCCGGGAACCCATAACAAATTA
 TAAAAACCTTGCTTTTATGAAAGTGATATTTGGAGAAAGTAAAAGAACCAAGAATCGATGGACAT
 CAACAACCTCGGGACTTTATTGATTGCTTCTGATCAAAATGGAGAAGGAAAAGCAAACCAACAGTCT
 GAATCACTATTGAAAACCTTGGTAATCACTGCAGCTGACTTACTTGGAGCTGGGACAGAGACAACAAGCA
 CAACCCCTGAGATATGCTCTCTTCTCTGCTGAAGCACCAGAGGTCACAGCTAAAGTCCAGGAAGAGAT
 TGAACGTGTCTTGGCAGAAACCGAGCCCTGCATGCAGGACAGGGCCACATGCCCTACACAGATGCT
 GTGGTGCACGAGGTCCAGAGATACATCGACCTCATCCCCACCAGCCTGCCCATGCAGTGCCTGTGACG
 TTAATTCAGAACTACCTCATTCCCAAGGGCACAACCATTAACCTCCCTCACTTGTGTCTACATGA
 CAACAAAGAATTTCCCAACCCAGAGATGTTTGACCCCTCGTCACTTCTGGATGAAGGTGGAAATTTAAG
 AAAAGTAACTACTTTCATGCCCTTCTCAGCAGGAAAACGGATTTGTGTGGAGAGGGCCTGGCCCGCATGG
 AGCTGTTTTTATCCTGACCTTCATTTTACAGAACTTTAACCTGAAATCTCTGATTGACCCAAAGGACCT
 TGACACAACCTCTGTTGCAATGGATTTGCTTCTGTCCCGCCTTCTATCAGCTGTGCTTCACTCTGCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC211377 representing NM_000769
 Red=Cloning site Green=Tags(s)

MDPFVVLVLCLSCLLLLLSIWRQSSGRGKLP GPPTPLPVIIGNILQIDIKDVSLSLNL SKIYGPVFTLYFG
 LERMVVLHGVEVKEALIDLGEESGRGHFPLAERANRFGIVFSNGKRWKEIRRFSLMTRLNFGMGKRS
 IEDRVQEEARCLVEELRKTASPCDPTFILGCAPCNVICSII FQKRFDYKDQQLNLMEKLNENIRIVST
 PWIQICNNFPTIIDYFPGTHNKLKLNLA FMESDILEKVKEHQESMDINNPRDFIDCFLIKMEKEKQNOQS
 EFTIENLVITAADLLGAGTETTSTLRYALLLLKHPEVTAKVQEIEIERVVGRNRSPCMQDRGHMPYTD
 VVHEVQRYIDL IPTSLPHAVTCDVKFRNYLIPKGTITL TSLTSVLHDNKEFPNPEMFDRPHFLDEGGNFK
 KSNYFMPFSAGKRICVGEGLARMELFLFTF ILQNFNLKSLIDPKDLDTTPVVNGFASVPPFYQLCFIPV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mg4987_b05.zip

Restriction Sites:

SgfI-MluI

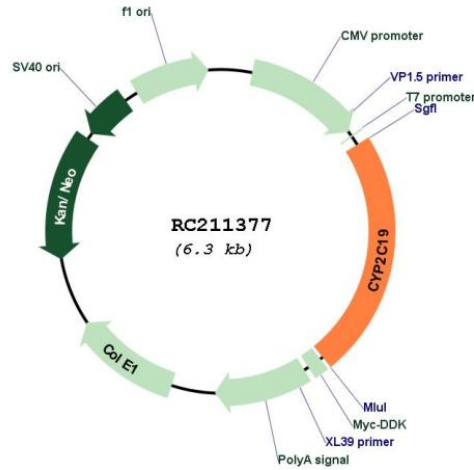
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_000769

ORF Size: 1470 bp

OTI Disclaimer: 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_000769.4](#)

RefSeq Size: 1473 bp

RefSeq ORF: 1473 bp

Locus ID: 1557

UniProt ID: [P33261](#)

Cytogenetics: 10q23.33

Domains: p450

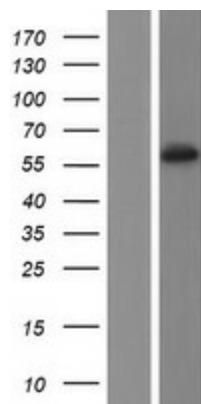
Protein Families: Druggable Genome

Protein Pathways: Arachidonic acid metabolism, Drug metabolism - cytochrome P450, Linoleic acid metabolism, Metabolic pathways, Metabolism of xenobiotics by cytochrome P450, Retinol metabolism

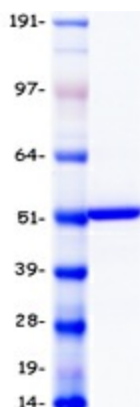
MW: 55.8 kDa

Gene Summary: This gene 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 is known to metabolize many xenobiotics, including the anticonvulsive drug mephenytoin, omeprazole, diazepam and some barbiturates. Polymorphism within this gene is associated with variable ability to metabolize mephenytoin, known as the poor metabolizer and extensive metabolizer phenotypes. The gene is located within a cluster of cytochrome P450 genes on chromosome 10q24. [provided by RefSeq, Jul 2008]

Product images:



Western blot validation of overexpression lysate (Cat# [LY400260]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211377 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CYP2C19 protein (Cat# [TP311377]). The protein was produced from HEK293T cells transfected with CYP2C19 cDNA clone (Cat# RC211377) using MegaTran 2.0 (Cat# [TT210002]).