

## Product datasheet for **RC213527**

### **CYP2A7 (NM\_000764) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CYP2A7 (NM_000764) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CYP2A7
Synonyms:	CPA7; CPAD; CYP2A; CYP11A7; P450-IIA4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC213527 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCTGGCCTCAGGGCTGCTTCTGGTGGCCTTGTCTGGCCTGCCTGACTGTGATGGTCTTGATGTCTGTCT  
 GGACGAGAGGAAGAGCAGGGGGAAGCTGCCTCCGGGACCCACCCACTGCCCTTATTGAAAACCTACCT  
 CCAGCTGAACACAGAGCACATATGTGACTCCATCATGAAGTTCAGTGAGTCTATGGCCCCGTGTTCAACC  
 ATTCACCTTGGGGCCCCGGCGGGCGTGGTGTGTGGACATGATGCCGTGAGGGAGGCTCTGGTGGACC  
 AGGCTGAGGAGTTCAGCGGGCAGGGCAGCAAGCCACCTTCGACTGGGTCTTCAAAGGCTATGGCGTGGC  
 GTTCAGCAACGGGGAGCGCGCAAGCAGCTCCTGCGCTTGGCCATCGCCACCTGAGGGACTTCGGGGTG  
 GGCAAGCGAGGCATCGAGGAGCGCATCCAGGAGGAGTTCGGGCTTCTCATCGAGGCCATCCGGAGCACGC  
 ACGGCGCCAATATCGATCCACCTTCTTCTGAGCCGCACAGTCTCCAATGTCATCAGCTCCATTGTCTT  
 TGGGGACCGCTTGGACTATGAGGACAAAGAGTTCTGTCTACTGCTGAGCGTGATGCTAGGAATCTCCAG  
 TTCACGTCACCTCCACGGGCGACTCTATGAGATGTTCTTCTCGGTGATGAAACACCTGCCAGGACCAC  
 AGCAACAGGCCTTAAGTTGCTGCAAGGGCTGGAGGACTTCATAGCCAAGAAGGTGGAGCACAACCAGCG  
 CACGCTGGATCCCAATCCCCACGGGACTTCATCGACTCCTTCTCATCCGCATGCAGGAGGAGGAGAAG  
 AACCCCAACACGGAGTCTACTTGAAGAACCTGATGATGAGCACGTTGAACCTCTTATTGCAGGCACCG  
 AGACGGTCAGCACCCCTGCGCTATGGCTTCTTGTCTCATGAAGCACCCAGAGGTGGAGGCCAAGGT  
 CCATGAGGAGATTGACAGAGTATCGGCAAGAACCAGCCAGCCAAAGTTTGGAGCCGGGCCAAGATGCC  
 TACATGGAGGCAGTATCCAGGATCCAAGATTTGGAGACGTGATCCCATGAGTTTGGCCCCGAGGG  
 TTAAGGACACCAAGTTTCGGGATTTTTCTCCCTAAGGGCACCAAGTGTTCCTATGCTGGGCTC  
 CGTGCTGAGAGACCCAGCTTCTTCTCCAACCCTCAGGACTTCAATCCCCAGCATTTCTGGATGACAAG  
 GGGCAGTTTAAGAAGAGTATGCTTTTTGTGCCCTTTTCCATCGGAAAGCGTACTGTTTCGGAGAAGGCC  
 TGGCCAGAATGGAGCTCTTCTCTTCTTACCACCGTCATGCAGAACTCCGCCTCAAGTCTCCAGCTC  
 ACCTAAGGACATTGACGTGTCCCCCAAACAGTGGGCTTGGCCACGATCCACGAAACTACACCATGAGC  
 TTCCTGCCCCGC

**ACGCGT**ACGCGGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC213527 protein sequence  
 Red=Cloning site Green=Tags(s)

MLASGLLLVALLACLTVMLMSVWQQRKSRGKLPPTPLPFIGNYLQLNTEHICDSIMKFSECYGPVFT  
 IHLGPRRAVVLCGHDAVREALVDQAEFSGRGEQATFDWVFKGYGVAFSNGERAKQLLRFAIATLRDFGV  
 GKRGIIEERIQEESGFLIEAIRSTHGANIDPTFFLSRTVSNVISSIVFGDRFDYEDKEFLSLLSVMLGIFQ  
 FTSTSTGQLYEMFSSVMKHLPGPQQQAFKLLQGLEDFIAKKVEHNQRTLDPNSPRDFIDSLIRMQEEEK  
 NPNTEFYLNLMSTLNLFIAGTETVSTTLRYGFLLLMKHPEVEAKVHEEIDRVIGKNRQPKFEDRAKMP  
 YMEAVIHEIQRFQDVIPMSLARRVKKDTKFRDFFLPKGTEVFPMLGSVLRDPSFFSNPQDFNPQHFLDDK  
 GQFKKSDAFVPPSIGKRYCFGEGLARMELFLFFTVMQNFRLKSSQSPKDIDVSPKHVGFATIPRNYTMS  
 FLPR

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6463\\_e09.zip](https://cdn.origene.com/chromatograms/mk6463_e09.zip)

**Restriction Sites:**

Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_000764

ORF Size: 1482 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\\_000764.2](#), [NP\\_000755.2](#)

RefSeq Size: 2281 bp

RefSeq ORF: 1485 bp

Locus ID: 1549

UniProt ID: [P20853](#)

Cytogenetics: 19q13.2

**Domains:** p450

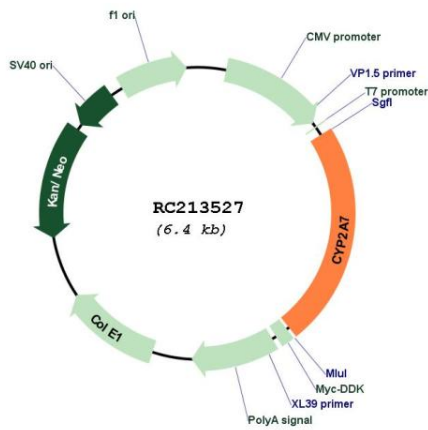
**Protein Families:** Druggable Genome, P450, Transmembrane

**Protein Pathways:** Caffeine metabolism, Drug metabolism - cytochrome P450, Drug metabolism - other enzymes, Metabolic pathways, Retinol metabolism

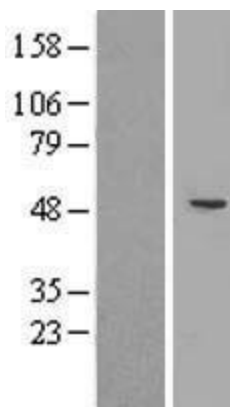
**MW:** 56.4 kDa

**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; its substrate has not yet been determined. This gene, which produces two transcript variants, is part of a large cluster of cytochrome P450 genes from the CYP2A, CYP2B and CYP2F subfamilies on chromosome 19q. [provided by RefSeq, Jul 2008]

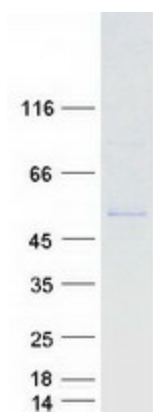
**Product images:**



Circular map for RC213527



Western blot validation of overexpression lysate (Cat# [LY424531]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213527 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CYP2A7 protein (Cat# [TP313527]). The protein was produced from HEK293T cells transfected with CYP2A7 cDNA clone (Cat# RC213527) using MegaTran 2.0 (Cat# [TT210002]).