**OriGene Technologies, Inc.**
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

# Product datasheet for RC214234

## CYP2A7 (NM_030589) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | CYP2A7 (NM_030589) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | CYP2A7 |
| **Synonyms:** | CPA7; CPAD; CYP2A; CYPIIA7; P450-IIA4 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC214234 representing NM_030589
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCTGGCCTCAGGGCTGCTTCTGGTGGCCTTGCTGGCCTGCCTGACTGTGATGGTCTTGATGTCTGTCT
GGCAGCAGAGGAAGAGCAGGGGGAAGCTGCCTCCGGGACCCACCCCACTGCCCTTCATTGGAAACTACCT
CCAGCTGAACACAGAGCACATATGTGACTCCATCATGAAGGTGTCCCAAGGCGTGGCGTTCAGCAACGGG
GAGCGCGCCAAGCAGCTCCTGCGCTTTGCCATCGCCACCCTGAGGGACTTCGGGGTGGGCAAGCGAGGCA
TCGAGGAGCGCATCCAGGAGGAGTCGGGCTTCCTCATCGAGGCCATCCGGAGCACGCACGGCGCCAATAT
CGATCCCACCTTCTTCCTGAGCCGCACAGTCTCCAATGTCATCAGCTCCATTGTCTTTGGGGACCGCTTT
GACTATGAGGACAAAGAGTTCCTGTCACTGCTGAGCATGATGCTAGGAATCTTCCAGTTCACGTCAACCT
CCACGGGGCAGCTCTATGAGATGTTCTCTTCGGTGATGAAACACCTGCCAGGACCACAGCAACAGGCCTT
TAAGTTGCTGCAAGGGCTGGAGGACTTCATAGCCAAGAAGGTGGAGCACAACCAGCGCACGCTGGATCCC
AATTCCCCACAGGACTTCATCGACTCCTTTCTCATCCACATGCAGGAGGAGGAGAAGAACCCCAACACGG
AGTTCTACTTGAAGAACCTGATGATGAGCACGTTGAACCTCTTCATTGCAGGCACCGAGACGGTCAGCAC
CACCCTGCGCTATGGCTTCTTGCTGCTCATGAAGCACCCAGAGGTGGAGGCCAAGGTCCATGAGGAGATT
GACAGAGTGATCGGCAAGAACCGGCAGCCCAAGTTTGAGGACCGGACCAAGATGCCCTACATGGAGGCAG
TGATCCACGAGATCCAAAGATTTGGAGACGTGATCCCCATGAGTTTGGCCCGCAGGGTTAAAAAGGACAC
CAAGTTTCGGGATTTTTTCCTCCCTAAGGGCACCGAAGTGTTCCCTATGCTGGGCTCCGTGCTGAGAGAC
CCCAGCTTCTTCTCCAACCCTCAGGACTTCAATCCCCAGCATTTCCTGGATGACAAGGGGCAGTTTAAGA
AGAGTGATGCTTTTGTGCCCTTTTCCATCGGAAAGCGGAACTGTTTCGGAGAAGGCCTGGCCAGAATGGA
GCTCTTTCTCTTCTTCACCACCGTCATGCAGAACTTCCGCCTCAAGTCCTCCCAGTCACCTAAGGACATT
GACGTGTCCCCCAAACACGTGGTCTTTGCCACGATCCCACGAAACTACACCATGAGCTTCCTGCCCCGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

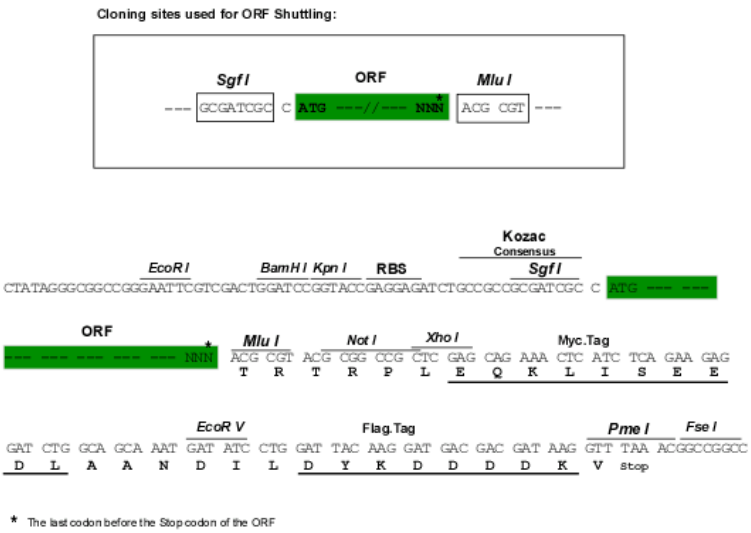
>RC214234 representing NM_030589
Red=Cloning site Green=Tags(s)

MLASGLLLVALLACLTVMVLMSVWQQRKSRGKLPPGPTPLPFIGNYLQLNTEHICDSIMKVSQGVAFSNG
ERAKQLLRFAIATLRDFGVGKRGIEERIQEESGFLIEAIRSTHGANIDPTFFLSRTVSNVISSIVFGDRF
DYEDKEFLSLLSMMLGIFQFTSTSTGQLYEMFSSVMKHLPGPQQQAFKLLQGLEDFIAKKVEHNQRTLDP
NSPQDFIDSFLIHMQEEEKNPNTEFYLKNLMMSTLNLFIAGTETVSTTLRYGFLLLMKHPEVEAKVHEEI
DRVIGKNRQPKFEDRTKMPYMEAVIHEIQRFGDVIPMSLARRVKKDTKFRDFFLPKGTEVFPMLGSVLRD
PSFFSNPQDFNPQHFLDDKGQFKKSDAFVPFSIGKRNCFGEGLARMELFLFFTTVMQNFRLKSSQSPKDI
DVSPKHVVFATIPRNYTMSFLPR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_030589

**ORF Size:** 1329 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_030589.2, NP_085079.2

**RefSeq Size:** 2128 bp

**RefSeq ORF:** 1332 bp

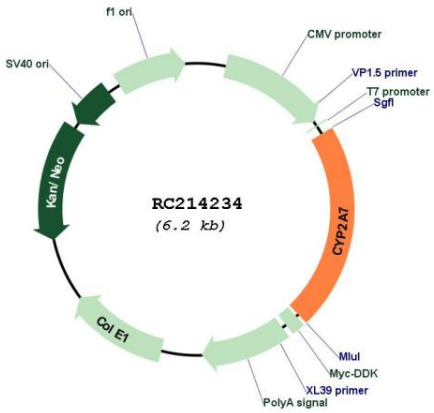
**Locus ID:** 1549

**UniProt ID:** P20853

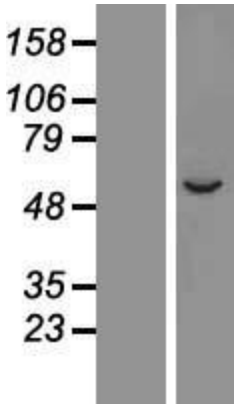
**Cytogenetics:** 19q13.2

| | |
|---|---|
| **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:** | 50.5 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] |

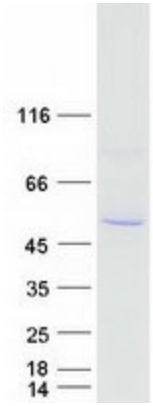
## Product images:




Circular map for RC214234




Western blot validation of overexpression lysate (Cat# [LY410788]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214234 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).




Coomassie blue staining of purified CYP2A7 protein (Cat# [TP314234]). The protein was produced from HEK293T cells transfected with CYP2A7 cDNA clone (Cat# RC214234) using MegaTran 2.0 (Cat# [TT210002]).