

## Product datasheet for **RG221636**

### Cytochrome P450 1A2 (CYP1A2) (NM\_000761) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cytochrome P450 1A2 (CYP1A2) (NM_000761) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cytochrome P450 1A2
Synonyms:	CP12; CYPIA2; P3-450; P450(PA)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RG221636 representing NM\_000761  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCATTGTCCCAGTCTGTTCCCTTCGCGCCACAGAGCTTCTCCTGGCCTCTGCCATCTTCTGCCTGG  
 TATTCTGGGTGCTCAAGGGTTTGTAGGCCTCGGGTCCCCAAAGGCCTGAAAAGTCCACCAGAGCCATGGGG  
 CTGGCCCTTGCTCGGCATGTGCTGACCCTGGGGAAGAACC CGCACCTGGCACTGTCAAGGATGAGCCAG  
 CGCTACGGGGACGTCCTGCAGATCCGCATTGGCTCCACGCCCGTCTGGTGTGAGCCGCTGGACACCA  
 TCCGGCAGGCCCTGGTGCAGGCGGACGATTCAAGGGCCGGCCTGACCTCTACACCTCCACCCTCAT  
 CACTGATGGCCAGAGCTTACCTTCAGCACAGACTCTGGACCGGTGTGGGCTGCCCGCCGGCGCCTGGCC  
 CAGAATGCCCTCAACACCTTCTCCATCGCCTCTGACCCAGCTTCTCATCTCTCTGCTACCTGGAGGAGC  
 ATGTGAGCAAGGAGGCTAAGGCCCTGATCAGCAGGTTGCAGGAGCTGATGGCAGGGCCTGGGCACTTCGA  
 CCCTTACAATCAGGTGGTGGTGTGAGTGGCCAACGTCATTGGTGCATGTGCTTCGGACAGCACTCCCT  
 GAGAGTAGCGATGAGATGCTCAGCCTCGTGAAGAACACTATGAGTTCGTGGAGACTGCCTCTCCGGGA  
 ACCCCCTGGACTTCTTCCCCATCTTCGCTACCTGCCTAACCCCTGCCCTGCAGAGGTTCAAGGCCTTCAA  
 CCAGAGGTTCTGTGTTCTGCAGAAAACAGTCCAGGAGCACTATCAGGACTTTGACAAGAACAGTGTG  
 CGGGACATCACGGGTGCCCTGTTCAAGCACAGCAAGAAGGGGCCTAGAGCCAGCGCAACCTCATCCAC  
 AGGAGAAGATTGTCAACCTTGTCAATGACATCTTTGGAGCAGGATTTGACACAGTACCACAGCCATCTC  
 CTGGAGCCTCATGACCTTGTGACCAAGCCTGAGATACAGAGGAAGATCCAGAAGGAGCTGGACACTGTG  
 ATTGGCAGGAGCGCGGCCCGGCTCTCTGACAGACCCAGCTGCCCTACTTGGAGGCCTTCATCCTGG  
 AGACCTTCGACACTCCTCTTCTTGCCTTACCATCCCCACAGCACAAACAAGGGACACAACAGCTGAA  
 TGGCTTACATCCCCAAGAAATGCTGTGCTTCTGTAACCAGTGGCAGGTCAACCATGACCCAGAGCTG  
 TGGGAGGACCCCTCTGAGTTCGGCCTGAGCGGTTCTCACCGCCGATGGCACTGCCATTAAACAAGCCCT  
 TGAGTGAGAAGATGATGCTGTTTGGCATGGGAAGCGCCGGTGTATCGGGGAAGTCTGGCCAAGTGGGA  
 GATCTTCTCTTCTGGCCATCTGCTACAGCAACTGGAGTTCAGCGTCCCGCGGGCGTGAAAAGTCGAC  
 CTGACCCCATCTACGGGCTGACCATGAAGCACGCCCGCTGTGAACATGTCCAGGCGCGGCTGCGCTTCT  
 CCATCAAC

**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA**

**Protein Sequence:**

>RG221636 representing NM\_000761  
 Red=Cloning site Green=Tags(s)

MALSQSVPFSAATELLASAIIFCLVFWLKLRLRPRVVKGLKSPPEPWGWPLLGHVLTGKNPHLALSRMSQ  
 RYGDVLQIRIGSTPVLVLSRLDIRQALVRQDDFKGRPDLYSTLITDQSLTFSTDSGPVWAARRRLA  
 QNALNTFSIASDPASSSSCYLEEHVSKEAKALISRLQELMAGPGHFDYPNQVVSVANVIGAMCFGQHFP  
 ESSDEMLSLVKNTHEFVETASSGNPLDFFPILRYLPNPALQRFKAFNRFLWFLQKTVQEHYQDFDKNSV  
 RDITGALFKHKKGPRASGNLIPQEKIVNLVNDIFGAGFDVTTAISWSLMLVTKPEIQRIQKELDTV  
 IGRERRPRLSDRPQLPYLEAFIETFRHSSFLPFTIPHSTTRDTLNGFYIPKKCCVFVNQWQVNHDP  
 WEDPSEFRPERFLTADGTAINKPLSEKMLFMGMKRRICIGEVLAKEIFLFLAILLQQLFVSPPGVKVD  
 LTPYIYGLTMKHARCEHVQARLRF SIN

**TRTRPLE - GFP Tag - V**

**Restriction Sites:**

Sgfl-Mlul

Cloning Scheme:



ACCN: NM\_000761

ORF Size: 1548 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\\_000761.3](#), [NP\\_000752.2](#)

RefSeq Size: 3127 bp

RefSeq ORF: 1551 bp

Locus ID: 1544

UniProt ID: [P05177](#)

Cytogenetics: 15q24.1

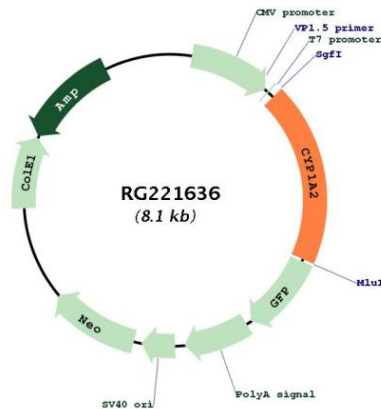
**Domains:** p450

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

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

**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. The protein encoded by this gene localizes to the endoplasmic reticulum and its expression is induced by some polycyclic aromatic hydrocarbons (PAHs), some of which are found in cigarette smoke. The enzyme's endogenous substrate is unknown; however, it is able to metabolize some PAHs to carcinogenic intermediates. Other xenobiotic substrates for this enzyme include caffeine, aflatoxin B1, and acetaminophen. The transcript from this gene contains four Alu sequences flanked by direct repeats in the 3' untranslated region. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RG221636