

## Product datasheet for **RG221358**

### Aromatase (CYP19A1) (NM\_031226) Human Tagged ORF Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                                    |
| Product Name:             | Aromatase (CYP19A1) (NM_031226) Human Tagged ORF Clone |
| Tag:                      | TurboGFP   |
| Symbol:                   | CYP19A1  |
| Synonyms:                 | ARO; ARO1; CPV1; CYAR; CYP19; CYPXIX; P-450AROM        |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-AC-GFP (PS100010)                                |
| E. coli Selection:        | Ampicillin (100 ug/mL)                                 |



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**ORF Nucleotide Sequence:**

>RG221358 representing NM\_031226  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTTTTGGAATGCTGAACCCGATACATTATAACATCACCAGCATCGTGCCTGAAGCCATGCCTGCTG  
 CCACCATGCCAGTCTGCTCCTCACTGGCCTTTTTCTCTTGGTGTGGAATTATGAGGGCACATCCTCAAT  
 ACCAGGTCCTGGCTACTGCATGGGAATTGGACCCCTCATCTCCACGGCAGATTCCTGTGGATGGGGATC  
 GGCAGTGCCTGCAACTACTACAACCGGGTATATGGAGAATTCATGCGAGTCTGGATCTCTGGAGAGGAAA  
 CACTCATTATCAGCAAGTCTCAAGTATGTTCCACATAATGAAGCACAATCATTACAGCTCTCGATTCCG  
 CAGCAAACCTGGGCTGCAGTGCATCGGTATGCATGAGAAAGGCATCATATTTAACAACAATCCAGAGCTC  
 TGGAAAACAACCTCGACCCTTCTTATGAAAGCTCTGTCAAGCCCGCCCTTGTTCGATGGTCACAGTCT  
 GTGCTGAATCCCTCAAAACACATCTGGACAGGTTGGAGGAGGTGACCAATGAATCGGGCTATGTGGACGT  
 GTTGACCTTCTGCGTGTGTCATGCTGGACACCTCTAACACGCTCTTCTTGAGGATCCCTTTGGACGAA  
 AGTGCTATCGTGGTAAAATCCAAGTTATTTTGTGATGCATGGCAAGCTCTCCTCATCAAACAGACATCT  
 TCTTTAAGATTTCTTGGCTATACAAAAAGTATGAGAAGTCTGTCAAGGATTTGAAAGATGCCATAGAAGT  
 TCTGATAGCAGAAAAAGACGCAGGATTTCCACAGAAGAGAACTGGAAGAATGTATGGACTTTGCCACT  
 GAGTTGATTTTAGCAGAGAAACGTGGTGACCTGACAAGAGAGAATGTGAACCAAGTGCATATTGAAATGC  
 TGATCGCAGTCTCTGACACCATGTCTGTCTTTTGTCTTCATGCTATTTCTCATTGCAAAGCACCTAA  
 TGTTGAAGAGGCAATAATAAAGGAAATCCAGACTGTTATTTGGTGAAGAGACATAAAGATTGATGATATA  
 CAAAAATAAAAGTATGAAAAACTTCATTTATGAGAGCATGCGGTACCAGCCTGCTGGACTTGGTCA  
 TGCCGAAAAGCCTTAGAAGATGATGTAATCGATGGCTACCCAGTAAAAAGGGGACAAACATTATCCTGAA  
 TATTGGAAGGATGCACAGACTCGAGTTTTTCCCAAACCAATGAATTTACTCTTGAAAAATTTTGCAAAG  
 AATGTTCTTATAGGTACTTTACGCCATTTGGCTTTGGGCCCGTGGCTGTGCAGAAAAGTACATCGCCA  
 TGGTGATGATGAAAGCCATCCTCGTTACTTCTGAGACGATTCCACGTGAAGACATTGCAAGGACAGTG  
 TGTTGAGAGCATACAGAAGATACAGACTTGTCTTGCACCCAGATGAGACTAAAAACATGCTGAAATG  
 ATCTTTACCCCAAGAACTCAGACAGGTGTCTGGAACAC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG221358 representing NM\_031226  
 Red=Cloning site Green=Tags(s)

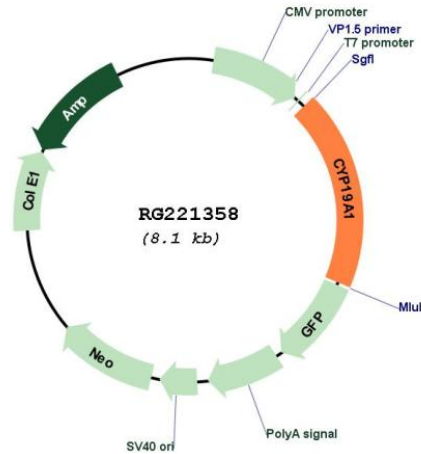
MVLEMLNPIHYNITSIVPEAMPAATMPVLLL TGLFLLVWNYEGTSSIPGPYCMGIGPLISHGRFLWMGI  
 GSACNYNRYVYGEFMRVWISGEETLIISKSSSMFHIMKHNHYSSRFGSKLGLQCIGMHEKGIIFNPNPEL  
 WKTRPPFFMKALSGPGLVRMVTVCAESLKTHLDRLEEVNTESGYVDVLTLLRRVMLDTSNTLFLRIPLDE  
 SAIVVKIQGYFDAWQALLIKPDIFFKISWLYKYEKSVKDLKDAIEVLI AEKRRRISTEEKLEECMDFAT  
 ELILA EKRGDLTRENVNQCILEMLIAAPDTMSVSLFFMLFLIAKHPNVEEAIKEIQTVIGERDIKIDDI  
 QKLVKMFENFIYESMRYQPVDLVMRKALEDDVIDGYPVKGTNIIILNIGRMHRLEFFPKPNEFTLENFAK  
 NVPYRYFPQFGFPRGCAGKYIAMVMMKAILVTLRRFHVKTLLQGQCVESI QKIHDLSLHPDETKNMLEM  
 IFTPRNSDRCLEH

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI



**Plasmid Map:**


**ACCN:** NM\_031226

**ORF Size:** 1509 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\\_031226.3](#)

**RefSeq Size:** 3116 bp

**RefSeq ORF:** 1512 bp

**Locus ID:** 1588

**UniProt ID:** [P11511](#)

**Cytogenetics:** 15q21.2

**Domains:** p450

**Protein Families:** Druggable Genome, P450

**Protein Pathways:** Androgen and estrogen metabolism, Metabolic pathways

**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 catalyzes the last steps of estrogen biosynthesis. Mutations in this gene can result in either increased or decreased aromatase activity; the associated phenotypes suggest that estrogen functions both as a sex steroid hormone and in growth or differentiation. Alternative promoter use and alternative splicing results in multiple transcript variants that have different tissue specificities. [provided by RefSeq, Dec 2016]