

## Product datasheet for **RC205890**

### Aromatase (CYP19A1) (NM\_000103) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Aromatase (CYP19A1) (NM_000103) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aromatase
Synonyms:	ARO; ARO1; CPV1; CYAR; CYP19; CYPXIX; P-450AROM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC205890 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGTTTTGAAATGCTGAACCCGATACATTATAACATCACCAGCATCGTGCCTGAAGCCATGCCTGCTG  
 CCACCATGCCAGTCTGCTCCTCACTGGCCTTTTTCTCTTGGTGTGGAATTATGAGGGCACATCCTCAAT  
 ACCAGGTCCTGGCTACTGCATGGGAATTGGACCCCTCATCTCCACGGCAGATTCTGTGGATGGGGATC  
 GGCAGTGCCTGCAACTACTACAACCGGGTGTATGGAGAATTCATGCGAGTCTGGATCTCTGGAGAGGAAA  
 CACTCATTATCAGCAAGTCTCAAGTATGTTCCACATAATGAAGCACAATCATTACAGCTCTCGATTCCG  
 CAGCAAACCTGGGCTGCAGTGCATCGGTATGCATGAGAAAGGCATCATATTTAACAAACATCCAGAGCTC  
 TGGAAAACAACCTCGACCCTTCTTATGAAAGCTCTGTGAGCCCGCCCTTGTTCGATGGTCACAGTCT  
 GTGCTGAATCCCTCAAAACACATCTGGACAGTGGAGGAGTGACCAATGAATCGGGCTATGTGGACGT  
 GTTGACCTTCTGCGTGTGTCATGCTGGACACCTCTAACACGCTCTTCTTGAGGATCTCTTTGGACGAA  
 AGTGCTATCGTGGTAAAATCCAAGTTATTTGATGCATGGCAAGCTCTCCTCATCAAACAGACATCT  
 TCTTTAAGATTTCTGGCTATACAAAAAGTATGAGAAGTCTGCAAGGATTTGAAAGATGCCATAGAAGT  
 TCTGATAGCAGAAAAAGACGCAGGATTTCCACAGAAGAGAACTGGAAGAATGTATGGACTTTGCCACT  
 GAGTTGATTTTAGCAGAGAAACGTGGTGACCTGACAAGAGAGAATGTGAACCAAGTGCATATTGAAATGC  
 TGATCGCAGTCTGACACCATGTCTGTCTTTTGTCTTCATGCTATTTCTCATTGCAAAGCACCTAA  
 TGTTGAAGAGGCAATAATAAAGGAAATCCAGACTGTTATTTGGTGAAGAGACATAAAGATTGATGATATA  
 CAAAAATAAAAGTATGAAAAACTTCATTTATGAGAGCATGCGGTACCAGCCTGTCTGGACTTGGTCA  
 TGCCGAAAGCCTTAGAAGATGATGTAATCGATGGCTACCCAGTAAAAAGGGACAAACATTATCCTGAA  
 TATTGGAAGGATGCACAGACTCGAGTTTTTCCCAAAACCAATGAATTTACTCTTGAAAAATTTGCAAAG  
 AATGTTCTTATAGTACTTTACGCCATTTGGCTTTGGGCCCGTGGCTGTGAGGAAAGTACATCGCCA  
 TGGTGATGATGAAAGCCATCCTCGTTACTTCTGAGACGATTCCACGTGAAGACATTGCAAGGACAGTG  
 TGTTGAGAGCATAACAGAAGATACAGACTTGTCTTGCACCCAGATGAGACTAAAAACATGCTGAAATG  
 ATCTTTACCCCAAGAACTCAGACAGGTGTCTGGAACAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC205890 protein sequence  
 Red=Cloning site Green=Tags(s)

MVLEMLNPIHYNITSIVPEAMPAATMPVLLL TGLFLLVWNYEGTSSIPGPYCMGIGPLISHGRFLWMGI  
 GSACNYNRYVYGEFMRVWISGEETLIISKSSSMFHIMKHNHYSSRFGSKLGLQCIGMHEKGIIFNNPEL  
 WKTTRPPFMKALSGPGLVRMVTVCAESLKTHLDRL EEVTVNESGYVDVLTLLRRVMLDTSNTLFLRISLDE  
 SAIVVKIQGYFDAWQALLIKPDIFFKISWLYKYEKSVKDLKDAIEVLIAEKRRRISTEEKLEECMDFAT  
 ELILA EKRGDLTRENVNQCILEMLIAAPDTMSVSLFFMLFLIAKHPNVEEAIKEIQTVIGERDIKIDDI  
 QKLKVMENFIYESMRYQPVVDLVMRKALEDDVIDGYPVKKGTNIILNIGRMHRLEFFPKPNEFTLENFAK  
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 IFTPRNSDRCLEH

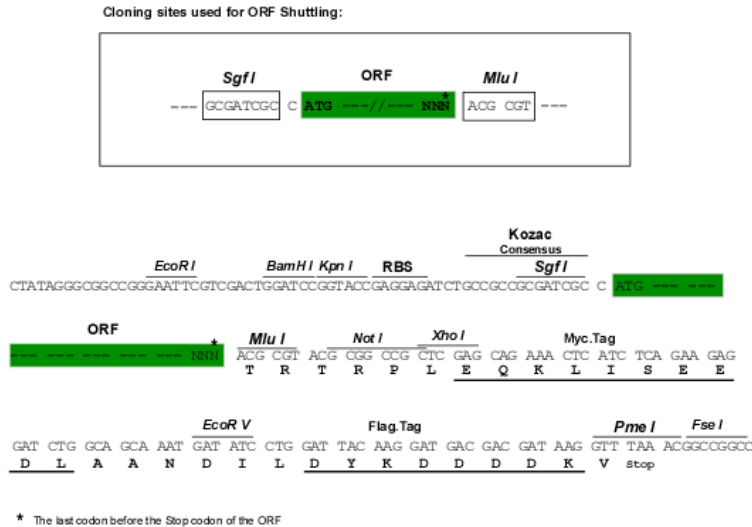
**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6034\\_a11.zip](https://cdn.origene.com/chromatograms/mk6034_a11.zip)

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_000103

**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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_000103.4](#)

**RefSeq Size:** 4422 bp

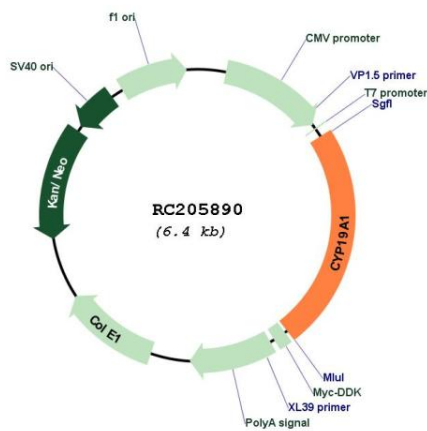
**RefSeq ORF:** 1512 bp

**Locus ID:** 1588

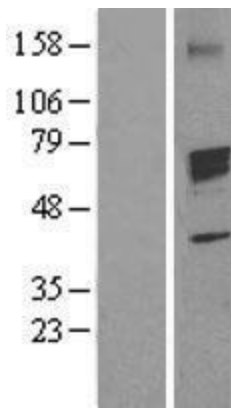
**UniProt ID:** [P11511](#)  
**Cytogenetics:** 15q21.2  
**Domains:** p450  
**Protein Families:** Druggable Genome, P450  
**Protein Pathways:** Androgen and estrogen metabolism, Metabolic pathways  
**MW:** 57.9 kDa

**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 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]

### Product images:



Circular map for RC205890



Western blot validation of overexpression lysate (Cat# [LY410595]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC221358] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CYP19A1 protein (Cat# [TP305890]). The protein was produced from HEK293T cells transfected with CYP19A1 cDNA clone (Cat# RC205890) using MegaTran 2.0 (Cat# [TT210002]).