

Product datasheet for **SC107980**

Aromatase (CYP19A1) (NM_031226) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Aromatase (CYP19A1) (NM_031226) Human Untagged Clone
Tag:	Tag Free
Symbol:	Aromatase
Synonyms:	ARO; ARO1; CPV1; CYAR; CYP19; CYPXIX; P-450AROM
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF sequence for NM_031226 edited
 GGGCGGCCGGAATTCGGCACGAGGAACCGTGGAGGCAAACAGGAAGGTGAAGAAGAACT
 TATCCTATCAGGACGGAAGGTCTGTGCTCGGGATCTCCAGACGTCGCGACTCTAAATT
 GCCCCCTCTGAGGTCAAGGAACACAAGATGGTTTTGGAAATGCTGAACCCGATACATTAT
 AACATCACCAGCATCGTGCTGAAGCCATGCCTGCTGCCACCATGCCAGTCTGCTCCTC
 ACTGGCCTTTTTCTTTGGTGTGGAATTATGAGGGCACATCCTCAATACCAGTCCCTGGC
 TACTGCATGGGAATTGGACCCCTCATCTCCACGGCAGATTCTGTGGATGGGGATCGGC
 AGTGCCTGCAACTACTACAACCGGTATATGGAGAATTCATGCGAGTCTGGATCTTGGGA
 GAGAAACACTCATTATCAGCAAGTCTCAAGTATGTTCCACATAATGAAGCACAATCAT
 TACAGCTCTCGATTTCGGCAGCAAACCTGGGCTGCAGTGCATCGGTATGCATGAGAAAGGC
 ATCATATTTAACAAACATCCAGAGCTCTGGAAAACAACCTCGACCCCTCTTTATGAAAGCT
 CTGTACAGCCCGGCCTTGTTCGTATGGTCACAGTCTGTGCTGAATCCCTCAAACACAT
 CTGGACAGGTTGGAGGAGGTGACCAATGAATCGGGCTATGTGGACGTGTTGACCCCTCTG
 CGTCGTGTATGCTGGACACCTTAACACGCTCTTCTTGGAGTCCCTTTGGACGAAAGT
 GCTATCGTGGTTAAAATCCAAGTTATTTTGTATGCATGGCAAGCTCTCCTCATCAAACCA
 GACATCTCTTTAAGATTTCTTGCTATACAAAAGTATGAGAAGTCTGTCAAGGATTTG
 AAAGATGCCATAGAAGTTCTGATAGCAGAAAAAGACGCAAGGATTTCCACAGAAGAGAAA
 CTGGAAGAATGTATGGACTTTGCCACTGAGTTGATTTTAGCAGAGAAACGTGGTACCTG
 ACAAGAGAGAATGTGAACCAGTGCATATTGAAATGCTGATCGCAGTCTCTGACACCATG
 TCTGTCTCTTTGTTCTTCATGCTATTTCTCATTGCAAAGCACCCTAATGTTGAAGAGGCA
 ATAATAAAGGAAATCCAGACTGTTATTGGTGAGAGAGACATAAAGATTGATGATATACAA
 AAATTAAGTGTATGAAAACCTCATTATGAGAGCATGCGGTACCAGCCTGTGCTGGAC
 TTGGTCATGCGCAAAGCCTTAGAAGATGATGTAATCGATGGCTACCCAGTAAAAAGGGG
 ACAAAACATTATCCTGAATATTGGAAGGATGCACAGACTCGAGTTTTTCCCAAACCCAAT
 GAATTTACTCTTGAAAATTTTGCAAAGAATGTTCTTATAGTACTTTTCAGCCATTTGGC
 TTTGGGCCCGTGGCTGTGCAGGAAAGTACATCGCCATGGTGTATGAAAGCCATCCTC
 GTTACACTTCTGAGACGATTCCACGTGAAGACATTGCAAGGACAGTGTGTTGAGAGCATA
 CAGAAGATACACGACTTGTCTTGCACCCAGATGAGACTAAAAACATGCTGGAAATGATC
 TTTACCCCAAGAACTCAGACAGGTGTCTGGAACACTAGAGAAGGCTGGTCAGTACCCAC
 TCTGGAGCATTTCTCATCAGTAGTTCACATACAAATCATCCATCCTTGCCAATAGTGCA
 TCCTCACAGTGAACACTCAGTGGCCATGGCATTATAGGCATACCTCCTATGGGTTGT
 CACCAAGCTAGGTGCTATTTGTATCTGCTCCTGTTACACCAGAGAACCAGGCTACAAG
 AGAAAAAGCAGAGGCCAAGATTTGAGGGAGAAATAGTCGGTGAAGAAACCGTATCCATA
 AAGACCCGATTCCACAAATGTGCTTTGAGAAGGATAGGCCTTCATTAACAAAATGTATG
 TCTGGTCCCCAGTAGAGCTCTACTGCCTCAACCC

5' Read Nucleotide Sequence: >OriGene 5' read for NM_031226 unedited
 CACGAGNAACCGTGGNAGCAAACAGGAAGTGAAGAAGAACTTATCCTATCAGGACGGAA
 GGTCTGTGCTCGGGATCTCCAGACGTCGCGACTCTAAATTGCCCCCTCTGAGGTCAAG
 GAACACAAGATGGTTTTGGAAATGCTGAACCCGATACATTATAACATCACCAGCATCGTG
 CCTGAAGCCATGCCTGCTGCCACCATGCCAGTCTGCTCCTCACTGGCCTTTTTCTTTG
 GTGTGGAATTATGAGGGCACATCCTCAATACCAGTCTGGTACTGCATGGGAATTGGA
 CCCCTCATCTCCACGGCAGATTCTGTGGATGGGGATCGGCAGTGCCTGCAACTACTAC
 AACCGGTATATGGAGAATTCATGCGAGTCTGGATCTCTGGAGAGGAAACACTCATTATC
 AGCAAGTCTCAAGTATGTTCCACATAATGAAGCACAATCATTACAGCTCTCGATTGGC
 AGCAAACCTGGGCTGCAGTGCATCGGTATGCATGAGAGAGGCATCATATTTAACAAACAT
 CCAGAGCTCTGGANAACAACCTCGACCCCTCTTTATGAAAGCTCTGTACAGCCCGGCCTT
 GTTCGTATGGTCACAGTCTGTGCTGAATCCCTCANACACATCTGGACAGGTTGGAGGAGG
 TG

3' Read Nucleotide Sequence:	>OriGene 3' read for NM_031226 unedited TATCTTTGGNACCGCGGCCCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTGGGAACA TGCCAAAGGATTTTTATTTGAATTTGAAGTGCATCATGTGAATTTTTTTTCTACAGCAG ACACAGGGCCCTAATAACTTAACCCAGGCTATTACTAAATTAGTTTGTATTACTTGAT GATTATATATAGTTTGTATTACCTGAATCTACAGGTAACACAATGAATTGTAGCACAGGC AAGTGGCTGAGGCATAAATCGACAGACTGGGAAAGAATTCCTCTGATTAACCTTTTGGC ACAGACAGATCATATGTAGACAAACAGGAATTAATTGGGCTTAATTCACAGCAAGGGTCA AATGCTGAATTTCTAAGCATTCTCCAAAGACTATGAATGTTGCTTTTCCACCTCCACAG AAAACAAAATTAAGTACTTTAATTCACACTAGCAGGTGGGTTTGGCCCCAGGTACCCTG ACATTGGCCTGGTCTTTCTAATCAACTTGAGTGTCTGCCCCAGACATAAAAAATCCCCT TGGGTTGAGGCAGTAGAGCTCTACTGGGAACCAGACATACATNTGTTAATGAAGGCCT ATCCTTCTCAAAGCACATTTGGTGAATCGGGTCTTTATGGATACGGNTTCTTCACCGAC TATTTCTCCCTCAAACCTTTGGCCTCTGCTTTNTCTTGTAGCCTGGNTCTCTGGGTGT GACAGGAGCAGATGACAAATAGCACCTAGCTTGGGTGACACCCCATAGAGGTATGCCTAT NAAATGCCATGGGCCACTGANNTGTCACTGTNGAGATGACACTATTGGCAGGNATGGATG ATTTNGNATGTGAACACTGATGAGAAAATGCTNNCAGGTGGGACTGACCAGNCTTTNCT AGTGTTCAGACACCTGNCTGATTNCTTGGGGTAAAGATCATTNTCAGCATGNTTTTATG TCTCT
Restriction Sites:	NotI-NotI
ACCN:	NM_031226
Insert Size:	2800 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none"> 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_031226.1 , NP_112503.1
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]

Transcript Variant: This variant (2) represents the use of an alternate promoter and contains alternate 5' exons (1.1 and 2a), compared to variant 4. All variants encode the same protein. The 5' end of this transcript contains long terminal repeat (LTR) sequence, initiates from an LTR promoter and results in placenta-specific expression. (PMID: 19577618). **Sequence Note:** The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.