CYP17A1 cDNA Clone – Cytochrome P450, Family 17, Subfamily A, Polypeptide 1 (Human)

PRODUCT OVERVIEW

Product Name	CYP17A1, cDNA Clone
Full Product Name	CYP17A1 cDNA Clone
Product Gene Name	CYP17A1 cdna clone
Sequence	atgtgggagc tcgtggctct cttgctgctt accctagctt atttgttttg gcccaagaga aggtgccctg gtgccaagta ccccaagagc ctcctgtccc tgcccctggt gggcagcctg ccattcctcc ccagacatgg ccatatgcat aacaacttct tcaagctgca gaaaaaatat ggccccatct attctgttcg tatgggcacc aagactacag tgattgtcgg ccaccaccag ctggccaagg aggtgcttat taagaagggc aaggacttct ctgggcggcc tcaaatggca actctagaca tcgcgtccaa caaccgtaag ggtatcgcct tcgctgactc tggcgcacac tggcagctgc atcgaaggct ggcgatggcc acctttgccc tgttcaagga tggcgatcag aagctggaga agatcatttg tcaggaaatc agtacattgt gtgatatgct ggccacccac aacggacagt ccatagacat ctcctttcct gtcttcgtgg cggtaaccaa tgtcatctcc ttgatctgct tcaatacctc ctacaagaat ggggaccctg agttgaatgt catacagaat tacaatgaag gcatcataga caacctgagc aaagacagcc tggtggacct agtcccctgg ttgaagattt tccccaacaa aaccctggaa aaattaaaga gccatgttaa aatacgaaat gatctgctga ataaaatact tgaaaattac aaggagaaat tccggagtga ctctatcacc aacatgctgg acacactgat gcaagccaag atgaactcag ataatggcaa tgctggccca gatcaagact cagagctgct ttcagataac cacattctca ccaccatagg ggacatcttt ggggctggcg tggagaccac cacctctgtg gttaaatgga ccctggcctt cctgctgcac aatcctcagg tgaagaagaa gctctacgag gagattgacc agaatgtggg tttcagccgc acaccaacta tcagtgaccg taaccgtctc ctcctgctgg aggccaccat ccgagaggtg cttcgcctca ggcccgtggc ccctatgctc atcccccaca aggccaacgt tgactccagc atcggtgagt ttgctgtgga caagggcaca gaagttatca tcaatctgtg ggcgctgcat cacaatgaga aggagtggca ccagccggat cagttcatgc ctgagcgttt cttgaatcca gcggggaccc agctcatctc accgtcagta agctatttgc ccttcggagc aggacctcgc tcctgtatag gtgagatcct ggcccgccag gagctcttcc tcatcatggc ctggctgctg cagaggttcg acctggaagt gccagatgat gggcagctgc cctccctgga aggcatcccc aaggtggtct ttctgatcga ctctttcaaa gtgaagatca aggtgcgcca ggcctggagg gaagcccagg ctgagggtag cacctaa
Molecular Weight	57,371 Da
OMIM	202110
Vector	pENTR223.1 or pUC
Clone Sequence Report	Provided with product shipment
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for CYP17A1 cdna clone	MBS1273329 is a cDNA clone targeting CYP17A1.
Other Notes	Small volumes of CYP17A1 cdna clone vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CYP17A1. It may not necessarily be applicable to this product.

NCBI GI #	38648747
NCBI GeneID	1586
NCBI Accession #	BC062997
UniProt Secondary Accession #	Q5TZV7
UniProt Related Accession #	P05093
NCBI Official Full Name	Homo sapiens cytochrome P450, family 17, subfamily A, polypeptide 1, mRNA
NCBI Official Synonym Full Names	cytochrome P450 family 17 subfamily A member 1
NCBI Official Symbol	CYP17A1

NCBI Official Synonym Symbols	CPT7; CYP17; S17AH; P450C17
UniProt Protein Name	Steroid 17-alpha-hydroxylase/17,20 lyase
UniProt Synonym Protein Names	17-alpha-hydroxyprogesterone aldolase (EC:4.1.2.30
Protein Family	Steroid 17-alpha-hydroxylase/17,20 lyase
UniProt Gene Name	CYP17A1
UniProt Synonym Gene Names	CYP17; S17AH; Cytochrome P450c17
UniProt Entry Name	CP17A_HUMAN
NCBI Protein Information	steroid 17-alpha-hydroxylase/17,20 lyase
NCBI Summary for CYP17A1	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. It has both 17alpha-hydroxylase and 17,20-lyase activities and is a key enzyme in the steroidogenic pathway that produces progestins, mineralocorticoids, glucocorticoids, androgens, and estrogens. Mutations in this gene are associated with isolated steroid-17 alpha-hydroxylase deficiency, 17-alpha-hydroxylase/17,20-lyase deficiency, pseudohermaphroditism, and adrenal hyperplasia. [provided by RefSeq, Jul 2008]
UniProt Comments for CYP17A1	CYP17A1: Conversion of pregnenolone and progesterone to their 17- alpha-hydroxylated products and subsequently to dehydroepiandrosterone (DHEA) and androstenedione. Catalyzes both the 17-alpha-hydroxylation and the 17,20-lyase reaction. Involved in sexual development during fetal life and at puberty. Defects in CYP17A1 are the cause of adrenal hyperplasia type 5 (AH5). AH5 is a form of congenital adrenal hyperplasia, a common recessive disease due to defective synthesis of cortisol. Congenital adrenal hyperplasia is characterized by androgen excess leading to ambiguous genitalia in affected females, rapid somatic growth during childhood in both sexes with premature closure of the epiphyses and short adult stature. Four clinical types: salt wasting (SW, the most severe type), simple virilizing (SV, less severely affected patients), with normal aldosterone biosynthesis, non-classic form or late onset (NC or LOAH), and cryptic (asymptomatic). Belongs to the cytochrome P450 family. Protein type: Oxidoreductase; EC 4.1.2.30; Lipid Metabolism - C21-steroid hormone; EC 1.14.99.9 Chromosomal Location of Human Ortholog: 10q24.3 Cellular Component: endoplasmic reticulum membrane Molecular Function: 17-alpha-hydroxyprogesterone aldolase activity; heme binding; oxygen binding; steroid 17-alpha-monooxygenase activity Biological Process: androgen biosynthetic process; glucocorticoid biosynthetic process; hormone biosynthetic process; progesterone metabolic process; sex differentiation; steroid biosynthetic process; steroid metabolic process; sterol metabolic process Disease: Adrenal Hyperplasia, Congenital, Due To 17-alpha-hydroxylase Deficiency
Research Articles on CYP17A1	**1.** CYP17A1 rs3824755 and rs743572 are associated with Alzheimer's disease in the Chinese Han population and act in combination with APOE e4.
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