

Recombinant Human CYP19A1 Protein (Leu196-Val373), His tagged

Cat. No. CYP19A1-1911H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant human CYP19A1 (Leu196-Val373) fused with His tag was expressed in E. coli.

Species

Human

Source

E.coli

ProteinLength

Leu196-Val373

Description

A cytochrome P450 monooxygenase that catalyzes the conversion of C19 androgens, androst-4-ene-3, 17-dione (androstenedione) and testosterone to the C18 estrogens, estrone and estradiol, respectively. Catalyzes three successive oxidations of C19 androgens: two conventional oxidations at C19 yielding 19-hydroxy and 19-oxo/19-aldehyde derivatives, followed by a third oxidative aromatization step that involves C1-beta hydrogen abstraction combined with cleavage of the C10-C19 bond to yield a phenolic A ring and formic acid. Alternatively, the third oxidative reaction yields a 19-norsteroid and formic acid. Converts dihydrotestosterone to delta1, 10-dehydro 19-nordihydrotestosterone and may play a role in homeostasis of this potent androgen. Also displays 2-hydroxylase activity toward estrone. Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (CPR; NADPH-ferrihemoprotein reductase).

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Form	Lyophilized powder/frozen liquid
Molecular Mass	23.09 kDa
Purity	>90% as determined by SDS-PAGE
Notes	For research use only.
Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.
Storage Buffer	Supplied as solution form in PBS, pH 7.5 or lyophilized from PBS, pH 7.5.
Reconstitution	Reconstitute in sterile water for a stock solution.
Shipping	They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name	CYP19A1 cytochrome P450, family 19, subfamily A, polypeptide 1 [Homo sapiens (human)]
Official Symbol	CYP19A1
Synonyms	CYP19A1; cytochrome P450, family 19, subfamily A, polypeptide 1; CYP19, cytochrome P450, subfamily XIX (aromatization of androgens); cytochrome P450 19A1; ARO; ARO1; aromatase; CPV1; CYAR; P 450AROM; estrogen synthase; estrogen synthetase; cytochrome P-450AROM; microsomal monooxygenase; flavoprotein-linked monooxygenase; cytochrome P450, subfamily XIX (aromatization of androgens); CYP19; CYPXIX; P-450AROM; MGC104309;

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Gene ID	1588
mRNA Refseq	NM_000103
Protein Refseq	NP_000094
MIM	107910
UniProt ID	P11511

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