Creative Enzymes®

aromatase

Cat. No. EXWM-0911

Lot. No. (See product label)

Introduction

Description	A cytochrome P-450. The enzyme catalyses three sequential hydroxylations of the androgens androst-4-ene-3,17-dione and testosterone, resulting in their aromatization and forming the estrogens estrone and 17β-estradiol, respectively. The direct electron donor to the enzyme is EC 1.6.2.4, NADPH-hemoprotein reductase.
Synonyms	CYP19A1 (gene name); estrogen synthetase (incorrect)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.14.14.14
Reaction	(1) testosterone + 3 O2 + 3 [reduced NADPH-hemoprotein reductase] = 17β-estradiol + formate + 4 H2O + 3 [oxidized NADPH-hemoprotein reductase] (overall reaction); (1a) testosterone + O2 + [reduced NADPH-hemoprotein reductase] = 19-hydroxytestosterone + H2O + [oxidized NADPH-hemoprotein reductase]; (1b) 19-hydroxytestosterone + O2 + [reduced NADPH-hemoprotein reductase] = 19-oxotestosterone + 2 H2O + [oxidized NADPH-hemoprotein reductase]; (1c) 19-oxotestosterone + O2 + [reduced NADPH-hemoprotein reductase] = 17β-estradiol + formate + H2O + [oxidized NADPH-hemoprotein reductase]; (2) androst-4-ene-3,17-dione + 3 O2 + 3 [reduced NADPH-hemoprotein reductase] = estrone + formate + 4 H2O + 3 [oxidized NADPH-hemoprotein reductase] (overall reaction); (2a) androst-4-ene-3,17-dione + O2 + [reduced NADPH-hemoprotein reductase] = 19-hydroxyandrost-4-ene-3,17-dione + H2O + [oxidized NADPH-hemoprotein reductase]; (2b) 19-hydroxyandrost-4-ene-3,17-dione + O2 + [reduced NADPH-hemoprotein reductase] = 19-oxo-androst-4-ene-3,17-dione + 2 H2O + [oxidized NADPH-hemoprotein reductase]; (2c) 19-oxoandrost-4-ene-3,17-dione + O2 + [reduced NADPH-hemoprotein reductase] = estrone + formate + H2O + [oxidized NADPH-hemoprotein reductase]
Notes	This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage	Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.