

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 17 β -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] = 17 β -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] = 17 β -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 °C for short term. For long term storage, store it at -20 °C~-80 °C.