Creative Enzymes®

17α-hydroxyprogesterone deacetylase

Cat. No. EXWM-0930

Lot. No. (See product label)

Introduction

Description	A microsomal cytochrome P-450 (heme-thiolate) protein that catalyses two independent reactions at the same active site - the 17-hydroxylation of pregnenolone and progesterone, which is part of glucocorticoid hormones biosynthesis (EC 1.14.14.19), and the conversion of the 17-hydroxylated products via a 17,20-lyase reaction to form androstenedione and 3β-hydroxyandrost-5-en-17-one, leading to sex hormone biosynthesis. The activity of this reaction is dependent on the allosteric interaction of the enzyme with cytochrome b5 without any transfer of electrons from the cytochrome. The enzymes from different organisms differ in their substrate specificity. While the enzymes from pig, hamster, and rat accept both 17α-hydroxyprogesterone and 17α-hydroxypregnenolone, the enzymes from human, bovine, sheep, goat, and bison do not accept the former, and the enzyme from guinea pig does not accept the latter.
Synonyms	C-17/C-20 lyase; 17α-hydroxyprogesterone acetaldehyde-lyase; CYP17; CYP17A1 (gene name); 17α-hydroxyprogesterone 17,20-lyase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.14.14.32
CAS No.	62213-24-5
Reaction	(1) 17α-hydroxyprogesterone + [reduced NADPH-hemoprotein reductase] + O2 = androstenedione + acetate + [oxidized NADPH-hemoprotein reductase] + H2O; (2) 17α-hydroxypregnenolone + [reduced NADPH-hemoprotein reductase] + O2 = 3β-hydroxyandrost-5-en-17-one + acetate + [oxidized NADPH-hemoprotein reductase] + H2O
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 ℃.