

3 β -hydroxy- Δ 5-steroid dehydrogenase

Cat. No. EXWM-0049

Lot. No. (See product label)

Introduction

Description

This activity is found in several bifunctional enzymes that catalyse the oxidative conversion of Δ 5-3-hydroxy steroids to a Δ 4-3-oxo configuration. This conversion is carried out in two separate, sequential reactions; in the first reaction, which requires NAD⁺, the enzyme catalyses the dehydrogenation of the 3 β -hydroxy steroid to a 3-oxo intermediate. In the second reaction the reduced coenzyme, which remains attached to the enzyme, activates the isomerization of the Δ 5 form to a Δ 4 form (cf. EC 5.3.3.1, steroid Δ -isomerase). Substrates include dehydroepiandrosterone (which is converted into androst-5-ene-3,17-dione), pregnenolone (converted to progesterone) and cholest-5-en-3-one, an intermediate of cholesterol degradation.

Synonyms

progesterone reductase; Δ 5-3 β -hydroxysteroid dehydrogenase; 3 β -hydroxy-5-ene steroid dehydrogenase; 3 β -hydroxy steroid dehydrogenase/isomerase; 3 β -hydroxy- Δ 5-C27-steroid dehydrogenase/isomerase; 3 β -hydroxy- Δ 5-C27-steroid oxidoreductase; 3 β -hydroxy-5-ene-steroid oxidoreductase; steroid- Δ 5-3 β -ol dehydrogenase; 3 β -HSDH; 5-ene-3- β -hydroxysteroid dehydrogenase; 3 β -hydroxy-5-ene-steroid dehydrogenase

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 1.1.1.145

CAS No.

9044-85-3

Reaction

a 3 β -hydroxy- Δ 5-steroid + NAD⁺ = a 3-oxo- Δ 5-steroid + NADH + H⁺

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.