

3 α -Hydroxysteroid Dehydrogenase, Recombinant

Cat. No. NATE-1138

Lot. No. (See product label)

Introduction

Description

In enzymology, a 3 α -hydroxysteroid dehydrogenase (B-specific) (EC 1.1.1.50) is an enzyme that catalyzes the chemical reaction: androsterone + NAD (P)⁺ \leftrightarrow 5 α -androsterane-3,17-dione + NAD (P)H + H⁺. The 3 substrates of this enzyme are androsterone, NAD⁺, and NADP⁺, whereas its 4 products are 5 α -androsterane-3,17-dione, NADH, NADPH, and H⁺. This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with NAD⁺ or NADP⁺ as acceptor, more specifically it is part of the group of hydroxysteroid dehydrogenases.

Applications

Bile acid is one of the substrates of 3 α -hydroxy steroid dehydrogenase. 3 α -hydroxy steroid dehydrogenase is used to catalyze the dehydrogenation reaction of hydroxy steroid in clinic. So, HSD is used to detect the total bile acid clinically.

Synonyms

hydroxyprostaglandin dehydrogenase; 3 α -hydroxysteroid oxidoreductase; steroid 3 α ; 3 α -hydroxysteroid dehydrogenase (B-specific); 3 α -hydroxysteroid 3-dehydrogenase (B-specific); 3 α -hydroxysteroid:NAD (P)⁺ 3-oxidoreductase (B-specific); EC 1.1.1.50

Product Information

Appearance

White powder, lyophilized

EC Number

EC 1.1.1.50

CAS No.

9028-56-2

Molecular Weight

About 28 kDa (SDS-PAGE detection)

Purity

90% (SDS-PAGE test)

Activity

About 50U/mg powder

Isoelectric point

4.8

Optimum pH

7.0-9.0

Activators

EDTA

Inhibitors

Hg²⁺, Ag⁺

Buffer

20mM Tris, pH8.0

Unit Definition

One unit will catalyze the oxidation of 1 μ mol of androsterone per min at pH8.9 at 25°C.

Storage and Shipping Information

Storage

4°C, store at -20°C for long-term preservation.