Creative Enzymes®

3α-Hydroxysteroid Dehydrogenase, Recombinant

Cat. No. NATE-1138

Lot. No. (See product label)

Introduction

Description	In enzymology, a 3alpha-hydroxysteroid dehydrogenase (B-specific) (EC 1.1.1.50) is an enzyme that catalyzes the chemical reaction: androsterone + NAD (P)+ ↔ 5alpha-androstane-3,17-dione + NAD (P)H + H+. The 3 substRates of this enzyme are androsterone, NAD+, and NADP+, whereas its 4 products are 5alpha-androstane-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 3α-hydroxy steroiddehydrogenase. 3α-hydroxy steroid dehydrogenase is used to catalyzethe dehydrogenation reaction of hydroxy steroid in clinic. So, HSD is used to detect the total bile acid clinically.
Synonyms	hydroxyprostaglandin dehydrogenase; 3α-hydroxysteroid oxidoreductase; sterognost 3α; 3α-hydroxysteroid dehydrogenase (B-specific); 3α-hydroxysteroid 3-dehydrogenase (B-specific); 3α-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 1μmol 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.