Creative Enzymes®

3α-Hydroxysteroid Dehydrogenase from B. choshinensis, Recombinant

Cat. No. DIA-413

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.

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

Species	B. choshinensis
Source	B. choshinensis
Appearance	White lyophilizate
EC Number	EC 1.1.1.50
CAS No.	9028-56-2
Molecular Weight	ca. 41 kDa
Activity	> 30 U/mg lyophilizate
pH Stability	6.0–10.0
Optimum pH	11
Thermal stability	below 45°C
Optimum temperature	50–60°C
Michaelis Constant	2.4 x 10^-5 M (androsterone) 3.0 x 10^-6 M (NAD)
Structure	2 subunits of 25 kDa (SDS-PAGE)
Stabilizers	Trehalose
Unit Definition	One unit (U) is defined as the amount of enzyme which produces 1 μmol of NADH per min at 25°C and pH 8.9.

Storage and Shipping Information

Storage at -20°C

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Stability	stable at 37°C for at least four weeks