

Acyl-CoA oxidase from Microorganism

Cat. No. NATE-1711

Lot. No. (See product label)

Introduction

Description

In enzymology, an acyl-CoA oxidase (EC 1.3.3.6) is an enzyme that catalyzes the chemical reaction $\text{acyl-CoA} + \text{O}_2 \rightleftharpoons \text{trans-2, 3-dehydroacyl-CoA} + \text{H}_2\text{O}_2$. Thus, the two substrates of this enzyme are acyl-CoA and O_2 , whereas its two products are trans-2, 3-dehydroacyl-CoA and H_2O_2 . This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-CH group of donor with oxygen as acceptor. This enzyme participates in 3 metabolic pathways: fatty acid metabolism, polyunsaturated fatty acid biosynthesis, and ppar signaling pathway. It employs one cofactor, FAD.

Synonyms

acyl-CoA oxidase; EC 1.3.3.6; fatty acyl-CoA oxidase; acyl coenzyme A oxidase; fatty acyl-coenzyme A oxidase; ACO

Product Information

Source	Microorganism
Form	Yellow powder, lyophilized
EC Number	EC 1.3.3.6
CAS No.	61116-22-1
Molecular Weight	78 kDa (SDS-PAGE)
Activity	>30U/mg protein
Isoelectric point	6.7
pH Stability	6.0~8.5 (25°C, 15hr)
Optimum pH	8.5
Thermal stability	< 45°C (pH 7.5, 15min)
Optimum temperature	37~40°C
Michaelis Constant	10^{-5} M (Palmitoyl-CoA)
Inhibitors	Ag^+ , Hg^{2+} , Zn^{2+} , Cu^{2+} , Ni^{2+}
Unit Definition	One unit will convert one micromole of Acyl-CoA to trans-2,3-dehydroacyl-CoA per min at pH 7.5 at 37°C.
Notes	INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.

Storage and Shipping Information

Storage	Store at -20°C.
----------------	-----------------