

## 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 acyl-CoA + O<sub>2</sub> ⇌ trans-2, 3-dehydroacyl-CoA + H<sub>2</sub>O<sub>2</sub>. Thus, the two substrates of this enzyme are acyl-CoA and O<sub>2</sub>, whereas its two products are trans-2, 3-dehydroacyl-CoA and H<sub>2</sub>O<sub>2</sub>. 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

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

### Storage and Shipping Information

**Storage** Store at -20°C

