

## Acyl-CoA oxidase from Microorganism

### Product Information

<b>Cat#</b>	NATE-1711
<b>Abbr</b>	ACO (Microorganism)
<b>Similar</b>	Acyl-CoA oxidase
<b>Source</b>	Microorganism
<b>Description</b>	In enzymology, an acyl-CoA oxidase (EC 1.3.3.6) is an enzyme that catalyzes the chemical reaction $\text{acyl-CoA} + \text{O}_2 \leftrightarrow \text{trans-2, 3-dehydroacyl-CoA} + \text{H}_2\text{O}_2$ . Thus, the two substrates of this enzyme are acyl-CoA and $\text{O}_2$ , whereas its two products are trans-2, 3-dehydroacyl-CoA and $\text{H}_2\text{O}_2$ . 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.
<b>Form</b>	Yellow powder, lyophilized
<b>Enzyme Commission Number</b>	EC 1.3.3.6
<b>Activity</b>	>30U/mg protein
<b>CAS No.</b>	61116-22-1
<b>Molecular Weight</b>	78 kDa (SDS-PAGE)
<b>Isoelectric point</b>	6.7
<b>pH Stability</b>	6.0~8.5 (25°C, 15hr)
<b>Michaelis Constant</b>	$10^{-5}$ M (Palmitoyl-CoA)
<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>Optimum pH</b>	8.5



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<b>Optimum temperature</b>	37~40°C
<b>Thermal stability</b>	< 45°C (pH 7.5, 15min)
<b>Storage</b>	Store at -20°C.
<b>Inhibitors</b>	Ag <sup>+</sup> , Hg <sup>2+</sup> , Zn <sup>2+</sup> , Cu <sup>2+</sup> , Ni <sup>2+</sup>
<b>Synonyms</b>	acyl-CoA oxidase; EC 1.3.3.6; fatty acyl-CoA oxidase; acyl coenzyme A oxidase; fatty acyl-coenzyme A oxidase; ACO