



Acyl-CoA oxidase from Microorganism

Product Information

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



Creative Enzymes

Diagnostic Enzymes

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