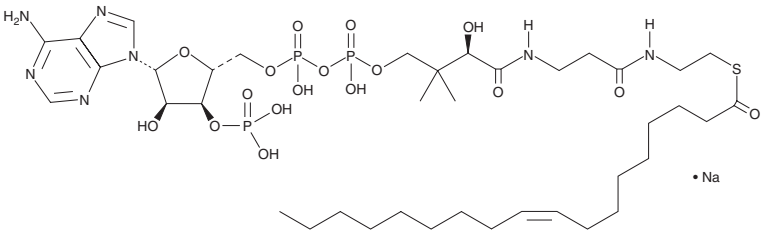
PRODUCT INFORMATION

Oleoyl-Coenzyme A (sodium salt)

Item No. 35384

Formal Name:	coenzyme A, S-(9Z)-9-octadecenoate, monosodium salt
Synonyms:	Oleoyl (*cis*-9-C18:1)-CoA, Oleoyl-CoA
MF:	$C_{39}H_{68}N_7O_{17}P_3S \bullet Na$
FW:	1,055.0
Purity:	≥90%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Oleoyl-coenzyme A (oleoyl-CoA) is supplied as a solid. A stock solution may be made by dissolving the oleoyl-CoA in water. The solubility of oleoyl-CoA in water is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Oleoyl-CoA is a thioester of oleic acid (Item No. 90260 | 24659) and CoA (Item Nos. 16147 | 21499 | 21722). It is a substrate for several acyl-CoA-dependent enzymes, including acyl-coenzyme A:cholesterol acyltransferase-1 (ACAT-1), ACAT-2, acyl-CoA dehydrogenase-9 (ACAD-9), membrane-bound O-acyltransferase 1 (MBOAT1), and MBOAT2.[1-3] Oleoyl-CoA binds the fatty acid metabolism regulator protein (FadR) promoter in *E. coli* (K_i = 0.005 µM).[4] Oleoyl-CoA (1 µM) activates sulfonylurea receptor 1 (SUR1) linked to ATP-sensitive potassium channel $K_{ir}6.2$ in *Xenopus* oocytes.[5]

References

1. Seo, T., Oelkers, P.M., Giattina, M.R., *et al.* Differential modulation of ACAT1 and ACAT2 transcription and activity by long chain free fatty acids in cultured cells. *Biochemistry* **40(15)**, 4756-4762 (2001).
2. Ensenauer, R., He, M., Willard, J.-M., *et al.* Human acyl-CoA dehydrogenase-9 plays a novel role in the mitochondrial β-oxidation of unsaturated fatty acids. *J. Biol. Chem.* **280(37)**, 32309-32316 (2005).
3. Gijón, M.A., Riekhof, W.R., Zarini, S., *et al.* Lysophospholipid acyltransferases and arachidonate recycling in human neutrophils. *J. Biol. Chem.* **283(44)**, 30235-30245 (2008).
4. DiRusso, C.C., Heimert, T.L., and Metzger, A.K. Characterization of FadR, a global transcriptional regulator of fatty acid metabolism in *Escherichia coli*. Interaction with the *fadB* promoter is prevented by long chain fatty acyl coenzyme A. *J. Biol. Chem.* **267(12)**, 8685-8691 (1992).
5. Gribble, F.M., Proks, P., Corkey, B.E., *et al.* Mechanism of cloned ATP-sensitive potassium channel activation by oleoyl-CoA. *J. Biol. Chem.* **273(41)**, 26383-26387 (1998).

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