

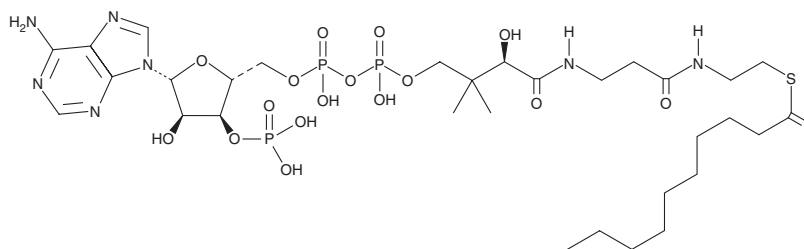
# PRODUCT INFORMATION



## Decanoyl-Coenzyme A (hydrate)

Item No. 28607

**CAS Registry No.:** 1264-57-9  
**Formal Name:** S-decanoate coenzyme A, hydrate  
**Synonym:** Decanoyl-CoA  
**MF:** C<sub>31</sub>H<sub>54</sub>N<sub>7</sub>O<sub>17</sub>P<sub>3</sub>S  
**FW:** 921.8  
**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

Decanoyl-coenzyme A (CoA) (hydrate) is supplied as a solid. A stock solution may be made by dissolving the decanoyl-CoA (hydrate) in water. The solubility of decanoyl-CoA in water (hydrate) is approximately 20 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Decanoyl-CoA is a thioester of decanoic acid (Item No. 20838) and CoA (Item Nos. 16147 | 21499 | 21722).<sup>1</sup> It inhibits the activity of citrate synthase (CS) and glutamate dehydrogenase (GDH) in mitochondria isolated from rat brain (IC<sub>50</sub>s = 437 and 420 μM, respectively).<sup>2</sup> Decanoyl-CoA also binds the fatty acid metabolism regulator protein (FadR) promoter in *E. coli* (K<sub>i</sub> = 2 μM).<sup>3</sup> It is produced during isomerase-dependent β-oxidation of oleic acid (Item Nos. 90260 | 24659) in isolated rat heart mitochondria.<sup>4</sup>

### References

1. Gregersen, N., Kølvråa, S., and Mortensen, P.B. Acyl-CoA: Glycine N-acyltransferase: *In vitro* studies on the glycine conjugation of straight- and branched-chained acyl-CoA esters in human liver. *Biochem. Med. Metab. Biol.* **35(2)**, 210-218 (1986).
2. Lai, J.C., Lian, B.B., Zhai, S., et al. Brain mitochondrial citrate synthase and glutamate dehydrogenase: Differential inhibition by fatty acyl coenzyme A derivatives. *Metab. Brain Dis.* **9(2)**, 143-152 (1994).
3. 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).
4. Ren, Y. and Schulz, H. Metabolic functions of the two pathways of oleate β-oxidation double bond metabolism during the β-oxidation of oleic acid in rat heart mitochondria. *J. Biol. Chem.* **278(1)**, 111-116 (2003).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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