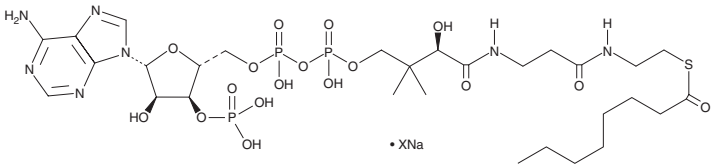
PRODUCT INFORMATION

Octanoyl-Coenzyme A (sodium salt)

Item No. 27868

Formal Name:	S-octanoate coenzyme A, sodium salt
Synonym:	Octanoyl-CoA
MF:	$C_{29}H_{50}N_7O_{17}P_3S \bullet XNa$
FW:	893.7
Purity:	≥95%
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

Octanoyl-coenzyme A (octanoyl-CoA) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the octanoyl-CoA (sodium salt) in the solvent of choice, which should be purged with an inert gas. Octanoyl-CoA (sodium salt) is soluble in organic solvents. Octanoyl-CoA (sodium salt) is slightly soluble in ethanol.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of octanoyl-CoA (sodium salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of octanoyl-CoA (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Octanoyl-CoA is a medium-chain acyl CoA and a metabolic intermediate in mitochondrial fatty acid β-oxidation.[1-3] Levels of octanoyl-CoA are increased in the liver of patients with Reye's syndrome and β-oxidation of octanoyl-CoA by medium-chain acyl CoA dehydrogenase (MCADH) is decreased in patients with MCADH deficiency (MCD).[2,3] Octanoyl-CoA inhibits citrate synthase and glutamate dehydrogenase.[1]

References

1. Lai, J.C., Liang, B.B., Jarvi, E.J., *et al.* Differential effects of fatty acyl coenzyme A derivatives on citrate synthase and glutamate dehydrogenase. *Res. Commun. Chem. Pathol. Pharmacol.* **82(3)**, 331-338 (1993).
2. Corkey, B.E., Hale, D.E., Glennon, M.V., *et al.* Relationship between unusual hepatic acyl coenzyme A profiles and the pathogenesis of Reye syndrome. *J. Clin. Invest.* **82(3)**, 782-788 (1988).
3. Amendt, B.A. and Rhead, W.J. Catalytic defect of medium-chain acyl-coenzyme A dehydrogenase deficiency. Lack of both cofactor responsiveness and biochemical heterogeneity in eight patients. *J. Clin. Invest.* **76(3)**, 963-969 (1985).

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