

PRODUCT INFORMATION



phytanoyl-Coenzyme A (triethylammonium salt)

Item No. 10011499

Formal Name: (3,7,11,15 -tetramethyl hexadecanoate)-coenzyme A, triethylammonium salt

Synonyms: Phytanic Acid Coenzyme A Ester (triethylammonium salt), phytanoyl-CoA (triethylammonium salt)

MF: $C_{41}H_{74}N_7O_{17}P_3S \cdot 3C_6H_{15}N$

FW: 1,365.6

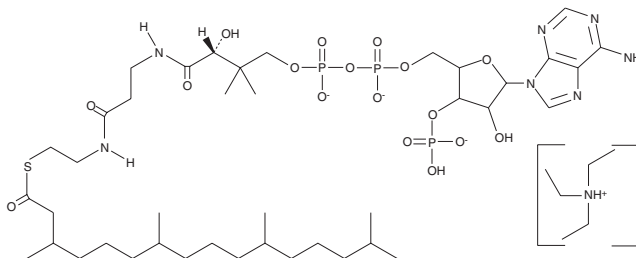
Purity: $\geq 95\%$

UV/Vis.: λ_{max} : 259 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥ 2 years



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

Laboratory Procedures

phytanoyl-Coenzyme A (triethylammonium salt) (phytanoyl-CoA (triethylammonium salt)) is supplied as a crystalline solid. A stock solution may be made by dissolving the phytanoyl-CoA (triethylammonium salt) in the solvent of choice. phytanoyl-CoA (triethylammonium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of phytanoyl-CoA (triethylammonium salt) is approximately 0.5 mg/ml in ethanol and approximately 10 mg/ml in DMSO and DMF.

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 phytanoyl-CoA (triethylammonium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of phytanoyl-CoA (triethylammonium salt) in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Phytanic acid is a saturated 20-carbon branched-chain fatty acid that can only be derived from dietary sources. Under normal conditions, phytanic acid is degraded via α -oxidation (oxidative decarboxylation) to produce pristanic acid, which then undergoes β -oxidation as part of the metabolism process.^{1,2} Degradation of phytanic acid is impaired in patients with peroxisomal disorders or diseases such as infantile phytanic acid storage disease or Refsum's disease.³ phytanoyl-CoA is the conjugate of phytanic acid and coenzyme A.

References

1. Watkins, P.A., Howard, A.E., and Mihalik, S.J. Phytanic acid must be activated to phytanoyl-CoA prior to its α -oxidation in rat liver peroxisomes. *Biochem. Biophys. Acta* **1214(3)**, 288-294 (1994).
2. Watkins, P.A., Howard, A.E., Gould, S.J., et al. Phytanic acid activation in rat liver peroxisomes is catalyzed by longchain acyl-CoA synthetase. *J. Lipid Res.* **37(11)**, 2288-2295 (1996).
3. Wanders, R.J.A., Boltshauser, E., Steinmann, B., et al. Infantile phytanic acid storage disease, a disorder of peroxisome biogenesis: A case report. *J. Neurol. Sci.* **98(1)**, 1-11 (1990).

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.

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