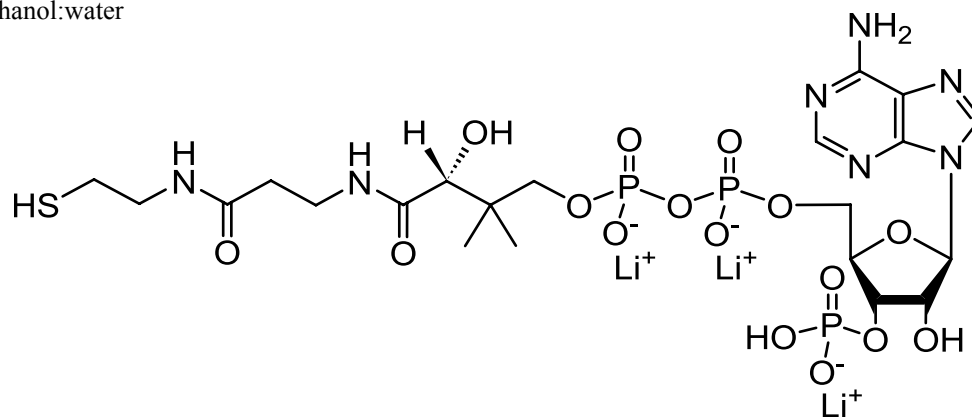


TECHNICAL DATA SHEET

Coenzyme A (lithium salt)

Catalog Number	870701	Physical state	Powder
Purity	> 99%	Transition temp.	No data
CAS	18439-24-2	CMC	No data
Synonyms	CoA	pK _a	No data
Molec. Formula	C ₂₁ H ₃₃ LiN ₇ O ₁₆ P ₃ S	TLC mobile phase	C:M:W*, 10:10:3, v/v Dissolve in: C:M:W*, 80:20:2, v/v
MW	785.140	Exact Mass	785.333
Percent composition	C 32.12% H 4.24% Li 2.65% N 12.48% O 32.60% P 11.83% S 4.08%		
Stability	Store in <-20°C freezer for one year as a powder		
Solubility	Soluble in water, methanol:water, C:M:W* 80:20:2 to 65:25:4, v/v		
Web link	870701		

* chloroform:methanol:water



Description:

Coenzyme A is active in the tricarboxylic acid cycle (Spry *et al*, 2008) and is an essential cofactor necessary for the metabolism of fatty acids (Leonardi *et al*, 2005; Spry *et al*, 2008). In fact, it has been reported that 9% of all known enzymatic activities use coenzyme A or a CoA thioester as a cosubstrate (Spry *et al*, 2008). For prokaryotes and eukaryotes, coenzyme A is assembled in five steps from vitamin B₅, pantothenic acid. The rate limiting step is the first step and is catalyzed by pantothenate kinase (Leonardi *et al*, 2005; Spry *et al*, 2008). Mutations in pantothenate kinase can lead to an inherited disorder, neurodegeneration with brain iron accumulation (Leonardi *et al*, 2005). The biosynthetic pathway for coenzyme A is a target for antibacterial drug discovery (Leonardi *et al*, 2005; Spry *et al*, 2008).

Product use: A stock solution may be prepared by dissolving the CoA in distilled/deionized water or buffer that has been sparged with nitrogen to remove oxygen (heat and/or sonication may be necessary to dissolve CoA). CoA's are soluble in water to $\leq 50\text{mg/mL}$. The aqueous solution should be stored at 2-8°C and used within 1 day. CoA's are not stable in aqueous solution and will degrade rapidly when stored in water. For long term storage, Avanti recommends that CoA's be stored as a powder at -20°C. The product should be stable in this form for at least 1 year.

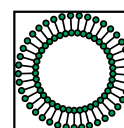
References:

- Leonardi R *et al* (2005) Coenzyme A: Back in action. *Prog Lipid Res.* 44(2-3):125-53
- Spry C, Kirk K, Saliba KJ (2008) Coenzyme A biosynthesis: an antimicrobial drug target. *FEMS Microbiol Rev* 32(1):56-106

Related products: [AcylCoenzymeA](#)
[Sphingolipids](#)
[LIPID MAPS Mass spectrometry lipid standards](#)

MSDS: Available on Avanti's website for product number 870701

Avanti Polar Lipids, Inc., 700 Industrial Park Drive, Alabaster, AL 35007-9105, U.S.A.
 Phone • (800) 227-0651 • (205) 663-2494 • Fax (800) 229-1004 • (205) 663-0756
 Email • orders@avantilipids.com • Technical Questions: technical@avantilipids.com
 • Inquiries: info@avantilipids.com • Analytical: analytical@avantilipids.com



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 POLAR LIPIDS, INC.