

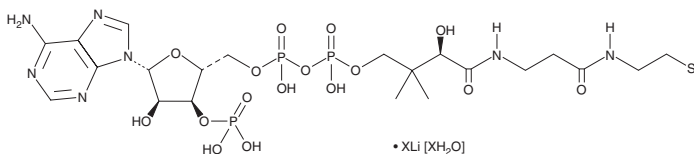
# PRODUCT INFORMATION



## Coenzyme A (lithium salt hydrate)

Item No. 21499

**Synonym:** CoA  
**MF:**  $C_{21}H_{33}N_7O_{16}P_3S \cdot XLi [XH_2O]$   
**FW:** 764.5  
**Purity:**  $\geq 95\%$   
**UV/Vis.:**  $\lambda_{max}$ : 260 nm  
**Supplied as:** A crystalline solid  
**Storage:**  $-20^\circ C$   
**Stability:**  $\geq 4$  years



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

### Laboratory Procedures

Coenzyme A (CoA) (lithium salt hydrate) is supplied as a crystalline solid. Organic solvent-free aqueous solutions of CoA (lithium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of CoA (lithium salt hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

CoA is an essential cofactor functioning as an acyl group carrier and carbonyl-activating group for the citric acid cycle and fatty acid metabolism.<sup>1</sup> About 4% of cellular enzymes utilize CoA as a substrate. It is synthesized from pantothenic acid (Item No. 17288) in a five-step process that requires ATP.<sup>2</sup> The pantothenate kinase step of the CoA biosynthetic pathway has been identified as a target for the development of antibacterial compounds.<sup>3</sup>

### References

1. Leonardi, R., Zhang, Y.M., Rock, C.O., et al. Coenzyme A: Back in action. *Prog. Lipid Res.* **44(2-3)**, 125-153 (2005).
2. Jackowski, S. Biosynthesis of pantothenic acid and coenzyme A. *Escherichia coli and Salmonella typhimurium: Cellular and molecular biology*. Neidhardt, F.C., Curtiss, R., Gross, C.A., Ingraham, J.L., editors, American Society for Microbiology (1996).
3. Begley, T.P., Kinsland, C., and Strauss, E. The biosynthesis of coenzyme A in bacteria. *Vitam. Horm.* **61**, 157-171 (2001).

#### 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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