

PRODUCT INFORMATION



Coenzyme A Oxidized (lithium salt)

Item No. 44599

Formal Name: coenzyme A disulfide, lithium salt

Synonyms: CoA disulfide, CoA Oxidized, CoAS-SCoA, (CoAS)₂, CoASSCoA

MF: C₄₂H₇₀N₁₄O₃₂P₆S₂ • XLi

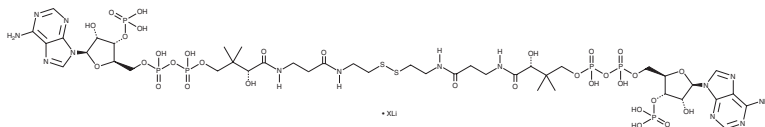
FW: 1,533.1

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

Coenzyme A oxidized (lithium salt) is supplied as a solid. A stock solution may be made by dissolving the coenzyme A oxidized (lithium salt) in the solvent of choice, which should be purged with an inert gas. Coenzyme A oxidized (lithium salt) is slightly soluble (0.1-1 mg/ml) in a 1:1 solution of acetonitrile:water.

Description

Coenzyme A oxidized is an oxidized dimer of coenzyme A (CoA; Item Nos. 21722 | 21499) linked by a disulfide bond that can be reduced in the presence of *tris*(2-carboxyethyl)phosphine (TCEP; Item No. 14329) to produce two molecules of CoA.¹ It has been used in the study of protein CoAlation, the formation of a disulfide bond between CoA and cellular proteins, as a response to oxidative stress in bacterial and mammalian cells.²⁻⁴

References

1. Mouterde, L.M.M. and Stewart, J.D. An efficient chemoenzymatic synthesis of coenzyme A and its disulfide. *Org. Process Res. Dev.* **20**(5), 954-959 (2016).
2. delCardayre, S.B., Stock, K.P., Newton, G.L., *et al.* Coenzyme A disulfide reductase, the primary low molecular weight disulfide reductase from *Staphylococcus aureus*: Purification and characterization of the native enzyme. *J. Biol. Chem.* **273**(10), 5744-5751 (1998).
3. Tsuchiya, Y., Peak-Chew, S.Y., Newell, C., *et al.* Protein CoAlation: A redox-regulated protein modification by coenzyme A in mammalian cells. *Biochem. J.* **474**(14), 2489-2508 (2017).
4. Tsuchiya, Y., Zhyvoloup, A., Baković, J., *et al.* Protein CoAlation and antioxidant function of coenzyme A in prokaryotic cells. *Biochem. J.* **475**(11), 1909-1937 (2018).

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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