

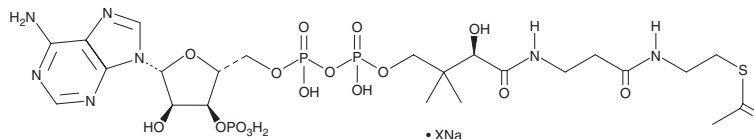
# PRODUCT INFORMATION



## Acetyl-Coenzyme A (sodium salt)

Item No. 16160

**CAS Registry No.:** 102029-73-2  
**Formal Name:** S-acetate coenzyme A, sodium salt  
**Synonym:** Acetyl-CoA  
**MF:** C<sub>23</sub>H<sub>38</sub>N<sub>7</sub>O<sub>17</sub>P<sub>3</sub>S • XNa  
**FW:** 809.6  
**Purity:** ≥90%  
**UV/Vis.:** λ<sub>max</sub>: 258 nm  
**Supplied as:** A crystalline 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

Acetyl-coenzyme A (acetyl-CoA) (sodium salt) is supplied as a crystalline solid. Aqueous solutions of acetyl-CoA (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of acetyl-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

Acetyl-CoA, the thioester of CoA (Item No. 16147) and acetic acid, is a pivotal molecule in biological systems. Foremost, it serves as a source of carbon for the Krebs cycle, for the synthesis of fatty acids, and for isoprenoid-based protein modifications.<sup>1-4</sup> Acetyl-CoA also serves as an intermediate in oxidation of fatty acids and amino acids and is formed by the oxidative decarboxylation of pyruvate in mitochondria.<sup>5</sup> It is an essential cofactor or substrate for acetyltransferases and acyltransferases, as in the post-translational modification of proteins and in the synthesis of the neurotransmitter acetylcholine.<sup>2-3</sup>

### References

1. Akram, M. Citric acid cycle and role of its intermediates in metabolism. *Cell Biochem. Biophys.* **68(3)**, 475-478 (2014).
2. Salminen, A., Kauppinen, A., Hiltunen, M., *et al.* Krebs cycle intermediates regulate DNA and histone methylation: Epigenetic impact on the aging process. *Ageing Res. Rev.* **16C**, 45-65 (2014).
3. Zaidi, N., Swinnen, J.V., and Smans, K. ATP-citrate lyase: A key player in cancer metabolism. *Cancer Res.* **72(15)**, 3709-3714 (2012).
4. Palsson-McDermott, E.M. and O'neill, L.A. The Warburg effect then and now: From cancer to inflammatory diseases. *BioEssays* **35(11)**, 965-973 (2013).
5. Miura, Y. The biological significance of ω-oxidation of fatty acids. *Proc. Jpn. Acad. Ser. B Phys. Biol. Sci.* **89(8)**, 370-382 (2013).

#### 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

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