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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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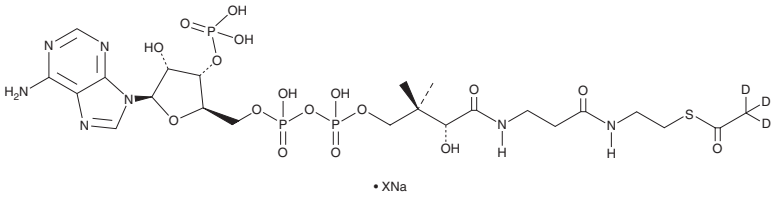
PRODUCT INFORMATION

Acetyl-Coenzyme A-d_3 (sodium salt)

Item No. 40458

Formal Name:	S-(acetate-d_3) coenzyme A, sodium salt
Synonym:	Acetyl-CoA-d_3
MF:	$C_{23}H_{35}D_3N_7O_{17}P_3S$ • XNa
FW:	812.6
Chemical Purity:	≥90% (Acetyl-coenzyme A)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_3); ≤1% d_0
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

Acetyl-coenzyme A-d_3 (acetyl-CoA-d_3) (sodium salt) is intended for use as an internal standard for the quantification of acetyl-CoA (Item No. 16160) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Acetyl-CoA-d_3 is supplied as a solid. A stock solution may be made by dissolving the acetyl-CoA-d_3 in the solvent of choice, which should be purged with an inert gas. Acetyl-CoA-d_3 is soluble in acetonitrile.

Description

Acetyl-CoA, the thioester of CoA (Item Nos. 16147 | 21499 | 21722) 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.[1-4] 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.[5] 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.[2,3]

References

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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).

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