

PRODUCT INFORMATION



Coenzyme Q₁₀-d₆ Item No. 30958

CAS Registry No.: 110971-02-3

Formal Name: (all-E)-2-(3,7,11,15,19,23,27,31,35,39-decamethyl-2,6,10,14,18,22,26,30,34,38-tetracontadecaenyl)-5,6-di(methoxy-d₃)-3-methyl-2,5-cyclohexadiene-1,4-dione

Synonyms: CoQ₁₀-d₆, Ubidecarenone-d₆, Ubiquinone-10-d₆, Ubiquinone Q₁₀-d₆

MF: C₅₉H₈₄D₆O₄

FW: 869.4

Chemical Purity: ≥95% (Coenzyme Q₁₀)

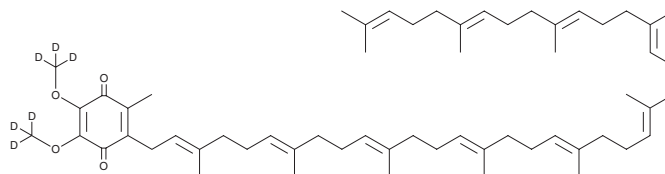
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀

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 Q₁₀-d₆ (CoQ₁₀-d₆) is intended for use as an internal standard for the quantification of CoQ₁₀ (Item No. 11506) 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).

CoQ₁₀-d₆ is supplied as a solid. A stock solution may be made by dissolving the CoQ₁₀-d₆ in the solvent of choice, which should be purged with an inert gas. CoQ₁₀-d₆ is soluble in organic solvents such as methanol, DMSO, and acetonitrile.

Description

CoQ₁₀ is a naturally occurring quinone found throughout the body in cell membranes, primarily in mitochondrial membranes, with highest concentrations in the heart, lungs, liver, kidneys, spleen, pancreas, and adrenal glands.¹ It is a component of the electron transport chain and participates in aerobic cellular respiration, generating energy in the form of ATP.² In its reduced form, CoQ₁₀ acts as an antioxidant, preventing the formation of reactive oxygen species.² CoQ₁₀ deficiencies have been associated with heart failure, hypertension, parkinsonism, mitochondrial encephalomyopathies, and other chronic diseases.^{3,4}

References

1. Saini, R. Coenzyme Q10: The essential nutrient. *J. Pharm. Bioallied Sci.* **3**(3), 466-467 (2011).
2. Crane, F.L. Biochemical functions of coenzyme Q₁₀. *J. Am. Coll. Nutr.* **20**(6), 591-598 (2001).
3. Wyman, M., Leonard, M., and Morledge, T. Coenzyme Q10: A therapy for hypertension and statin-induced myalgia? *Cleve. Clin. J. Med.* **77**(7), 435-442 (2010).
4. Quinzii, C.M. and Hirano, M. Primary and secondary CoQ₁₀ deficiencies in humans. *BioFactors* **37**(5), 361-365 (2011).

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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