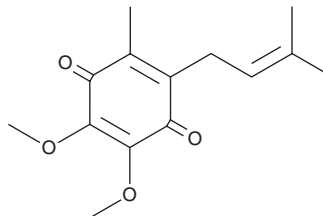


PRODUCT INFORMATION



Coenzyme Q₁ Item No. 18741

CAS Registry No.: 727-81-1
Formal Name: 2,3-dimethoxy-5-methyl-6-(3-methyl-2-buten-1-yl)-2,5-cyclohexadiene-1,4-dione
Synonyms: CoQ₁, NSC 268269, Ubiquinone-1, Ubiquinone-5
MF: C₁₄H₁₈O₄
FW: 250.3
Purity: ≥95%
UV/Vis.: λ_{max}: 274 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Coenzyme Q₁ (CoQ₁) is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as dimethyl formamide (DMF) purged with an inert gas can be used. CoQ₁ is soluble in DMF at a concentration of approximately 10 mg/ml.

Description

CoQ₁₀ is a component of the electron transport chain and participates in aerobic cellular respiration, generating energy in the form of ATP.¹ CoQ₁ is an amphipathic CoQ₁₀ homolog that has a tail consisting of a single isoprene unit. It has been used as an electron acceptor to study a range of oxidoreductases as isolated enzymes, in subcellular fractions, in intact cells in culture, and in perfused organs.²⁻⁴ Ubiquinone analogs, including CoQ₁, impact mitochondrial permeability transition pore (PTP) formation, as well as PTP-dependent cell death, in an analog- and cell-specific manner.⁵

References

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3. Audi, S.H., Merker, M.P., Krenz, G.S., *et al.* Coenzyme Q1 redox metabolism during passage through the rat pulmonary circulation and the effect of hyperoxia. *J. Appl. Physiol.* **105**(4), 1114-1126 (2008).
4. Bongard, R.D., Myers, C.R., Lindemer, B.J., *et al.* Coenzyme Q(1) as a probe for mitochondrial complex I activity in the intact perfused hyperoxia-exposed wild-type and Nqo1-null mouse lung. *Am. J. Physiol. Lung Cell Mol. Physiol.* **302**(9), L949-L958, (2012).
5. Devun, F., Walter, L., Belliere, J., *et al.* Ubiquinone analogs: a mitochondrial permeability transition pore-dependent pathway to selective cell death. *PLoS One* **5**(7), (2010).

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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