

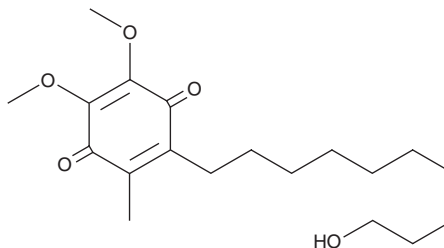
PRODUCT INFORMATION



Idebenone

Item No. 15475

CAS Registry No.: 58186-27-9
Formal Name: 2-(10-hydroxydecyl)-5,6-dimethoxy-3-methyl-2,5-cyclohexadiene-1,4-dione
Synonyms: CV-2619, Mnesis
MF: C₁₉H₃₀O₅
FW: 338.4
Purity: ≥98%
UV/Vis.: λ_{max}: 279, 407 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

Idebenone is supplied as a crystalline solid. A stock solution may be made by dissolving the idebenone in the solvent of choice, which should be purged with an inert gas. Idebenone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of idebenone in ethanol and DMF is approximately 30 mg/ml and approximately 25 mg/ml in DMSO.

Idebenone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, idebenone should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Idebenone has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Idebenone is a benzoquinone analog of coenzyme Q₁₀ (Item No. 11506), a natural quinone that serves as a cofactor in the electron transport chain in mitochondria.^{1,2} Like coenzyme Q₁₀, idebenone is a potent lipid antioxidant that prevents the generation of free radicals.^{1,3} In particular, idebenone targets mitochondria, preserves mitochondrial function, and confers cytoprotection.⁴⁻⁶ In this way, idebenone has neuroprotective effects and has applications in Friedreich ataxia.^{7,8}

References

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6. Heitz, F.D., Erb, M., Anklin, C., et al. Idebenone protects against retinal damage and loss of vision in a mouse model of Leber's hereditary optic neuropathy. *PLoS One* **7(9)**, e45182 (2012).
7. Liu, J. and Wang, L.N. Mitochondrial enhancement for neurodegenerative movement disorders: A systematic review of trials involving creatine, coenzyme q10, idebenone and mitoquinone. *CNS Drugs* **28(1)**, 63-68 (2014).
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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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