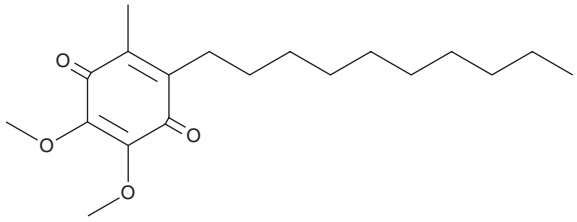
PRODUCT INFORMATION

Decylubiquinone

Item No. 21027

CAS Registry No.:	55486-00-5
Formal Name:	2-decyl-5,6-dimethoxy-3-methyl-2,5-cyclohexadiene-1,4-dione
MF:	$C_{19}H_{30}O_4$
FW:	322.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 277, 403 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

Decylubiquinone 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 DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of XX in these solvents is approximately 10 mg/ml.

Decylubiquinone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of decylubiquinone should be diluted with the aqueous buffer of choice. Decylubiquinone has a solubility of approximately 0.3 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Decylubiquinone is an analog of ubiquinone (coenzyme Q_{10}; Item No. 11506). It blocks reactive oxygen species production in response to glutathione depletion and inhibits activation of the mitochondrial permeability transition.[1] Decylubiquinone inhibited opening of the mitochondrial permeability transition pore in response to calcium overload in rat liver mitochondria in different cell lines at concentrations between 50-100 µM.[2]

References

1. Armstrong, J.S., Whiteman, M., Rose, P., *et al.* The Coenzyme Q_{10} analog decylubiquinone inhibits the redox-activated mitochondrial permeability transition: Role of mitochondrial complex III. *J. Biol. Chem.* **278(49)**, 49079-49084 (2003).
2. 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).

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