

PRODUCT INFORMATION

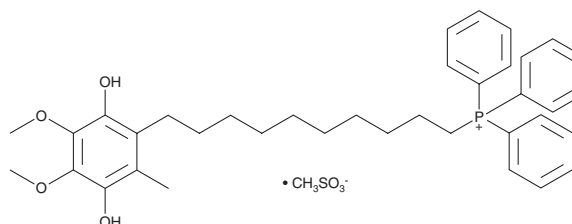


Mitoquinol

Item No. 89950

CAS Registry No.: 845959-55-9
Formal Name: [10-(2,5-dihydroxy-3,4-dimethoxy-6-methylphenyl)decyl]triphenyl-phosphonium, monomethanesulfonate

Synonyms: MitoQ, MitoQ₁₀
MF: C₃₇H₄₆O₄P • CH₃O₃S
FW: 680.8
Purity: ≥98%
UV/Vis.: λ_{max}: 268, 275, 290 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of mitoquinol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of mitoquinol in PBS, pH 7.2, is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Mitoquinol is a ubiquinone derivative that specifically accumulates in mitochondria due to the covalent attachment of the cation triphenylphosphonium.¹ It functions as an antioxidant, preventing lipid peroxidation-induced apoptosis and protecting mitochondria from oxidative damage.¹

Reference

1. Kelso, G.F., Porteous, C.M., Coulter, C.V., *et al.* Selective targeting of a redox-active ubiquinone to mitochondria within cells. Antioxidant and antiapoptotic properties. *J. Biol. Chem.* **276(7)**, 4588-4596 (2001).

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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