

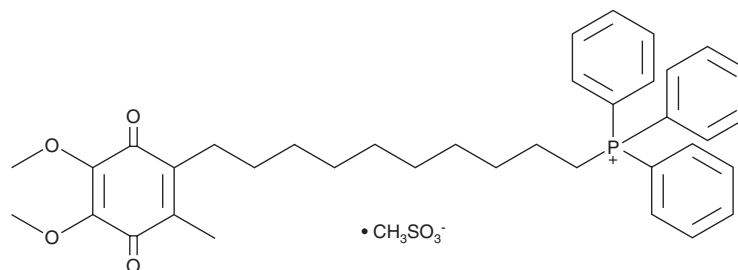
PRODUCT INFORMATION



Mitoquinone (mesylate)

Item No. 29317

CAS Registry No.: 845959-50-4
Formal Name: [10-(4,5-dimethoxy-2-methyl-3,6-dioxo-1,4-cyclohexadien-1-yl)decyl]triphenylphosphonium, monomethanesulfonate
Synonym: MitoQ
MF: C₃₇H₄₄O₄P • CH₃O₃S
FW: 678.8
Purity: ≥95%
Supplied as: A 10 mg/ml solution in ethanol:water (1:1)
Storage: -20°C
Stability: ≥1 year



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

Laboratory Procedures

Mitoquinone (mesylate) is supplied as a solution in ethanol:water (1:1). 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 methanol purged with an inert gas can be used. Mitoquinone (mesylate) is slightly soluble in these solvents.

Description

Mitoquinone is an oxidized form of mitoquinol (Item No. 89950).¹ It is reduced to mitoquinol in isolated bovine heart mitochondrial membranes using succinate for respiration when used at a concentration of 50 μM. Mitoquinone (0.01-10 μM) increases the rate of hydrogen peroxide formation in isolated bovine aortic endothelial cells (BAECs).² It induces cell death in isolated mouse pancreatic acinar cells when used at a concentration of 1 μM.³ Mitoquinone, in combination with mitoquinol, reduces malondialdehyde (MDA) levels in isolated rat liver mitochondria and decreases caspase activity in Jurkat cells.¹

References

1. Kelso, G.F., Porteous, C.M., Hughes, G., *et al.* Prevention of mitochondrial oxidative damage using targeted antioxidants. *Ann. N.Y. Acad. Sci.* **959**, 263-274 (2002).
2. Doughan, A.K. and Dikalov, S.I. Mitochondrial redox cycling of mitoquinone leads to superoxide production and cellular apoptosis. *Antioxid. Redox Signal.* **9(11)**, 1825-1836 (2007).
3. Huang, W., Cash, N., Wen, L., *et al.* Effects of the mitochondria-targeted antioxidant mitoquinone in murine acute pancreatitis. *Mediators Inflamm.* 901780, (2015).

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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