

PRODUCT INFORMATION



Vatiquinone

Item No. 26819

CAS Registry No.: 1213269-98-7
Formal Name: 2-[(3R,6E,10E)-3-hydroxy-3,7,11,15-tetramethyl-6,10,14-hexadecatrien-1-yl]-3,5,6-trimethyl-2,5-cyclohexadiene-1,4-dione

Synonyms: EPI 743, α -Tocotrienol quinone

MF: C₂₉H₄₄O₃

FW: 440.7

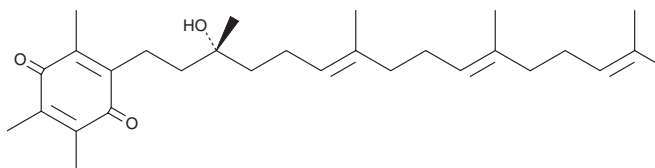
Purity: $\geq 98\%$

UV/Vis.: λ_{max} : 269 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

Vatiquinone 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. The solvent DMSO purged with an inert gas can be used. The solubility of vatiquinone in DMSO is approximately 20 mg/ml.

Description

Vatiquinone is a metabolite of α -tocotrienol (Item No. 10008377) that has antioxidant and ferroptosis inhibitory activity.^{1,2} It inhibits decreases in cell viability induced by the γ -glutamylcysteine synthetase inhibitor L-buthionine-(S,R)-sulfoximine (BSO; Item No. 14484) in primary fibroblasts isolated from patients with the mitochondrial diseases Friedreich's ataxia or Leigh syndrome (EC₅₀s = 24 and 30 nM, respectively).¹ Vatiquinone inhibits cell death and lipid peroxidation induced by the glutathione peroxidase 4 (GPX4) inhibitor RSL3 in primary fibroblasts isolated from patients with the mitochondrial encephalopathic epilepsy disease pontocerebellar hypoplasia type 6 (PCH6; EC₅₀s = 17.3-21.8 and 33.1-57.6 nM, respectively).²

References

- Shrader, W.D., Amagata, A., Barnes, A., *et al.* α -Tocotrienol quinone modulates oxidative stress response and the biochemistry of aging. *Bioorg. Med. Chem. Lett.* **21**(12), 3693-3698 (2011).
- Kahn-Kirby, A.H., Amagata, A., Maeder, C.I., *et al.* Targeting ferroptosis: A novel therapeutic strategy for the treatment of mitochondrial disease-related epilepsy. *PLoS One* **14**(3), e0214250 (2019).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM