

PRODUCT INFORMATION



Vitamin K₁ 2,3-epoxide

Item No. 16017

CAS Registry No.: 25486-55-9

Formal Name: 1a,7a-dihydro-1a-methyl-7a-(3,7,11,15-tetramethyl-2-hexadecen-1-yl)-naphth[2,3-b]oxirene-2,7-dione

Synonyms: 2,3-epoxy Phylloquinone, Phylloquinone oxide, Vitamin K oxide

MF: C₃₁H₄₆O₃

FW: 466.7

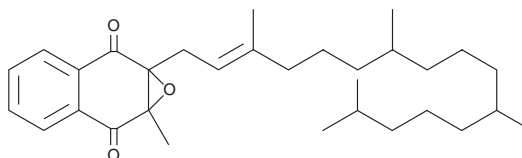
Purity: ≥95%

UV/Vis.: λ_{max}: 227 nm

Supplied as: A solution in ethanol

Storage: -20°C

Stability: As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Vitamin K₁ 2,3-epoxide 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 vitamin K₁ 2,3-epoxide in these solvents is approximately 25 mg/ml.

Description

Vitamin K is a dietary nutrient essential for the normal biosynthesis of factors that are required for blood clotting. It has also been shown to inhibit cell growth. Vitamin K₁ 2,3-epoxide is the inactive metabolite of vitamin K₁. During clotting, vitamin K₁ is converted to this epoxide form and then rapidly reduced back to the vitamin by a microsomal epoxide reductase. This is referred to as the vitamin K epoxide cycle.¹ Certain anticoagulants target clotting factor synthesis by inhibiting the recycling of vitamin K₁ from the inactive epoxide.¹

Reference

1. Choonara, I.A., Malia, R.G., Haynes, B.P., *et al.* The relationship between inhibition of vitamin K₁ 2,3-epoxide reductase and reduction of clotting factor activity with warfarin. *Br. J. Clin. Pharmacol.* **25**(1), 1-7 (1988).

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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