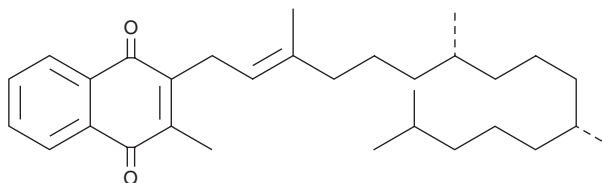


PRODUCT INFORMATION



Vitamin K₁ Item No. 21051

CAS Registry No.: 84-80-0
Formal Name: 2-methyl-3-[(2E,7R,11R)-3,7,11,15-tetramethyl-2-hexadecen-1-yl]-1,4-naphthalenedione
Synonyms: NSC 270681, α -Phylloquinone, *trans*-Phylloquinone
MF: C₃₁H₄₆O₂
FW: 450.7
Purity: ≥80% (allowing less than 20% z isomer)
UV/Vis.: λ_{max} : 247, 261, 269, 329 nm
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years
Special Conditions: Light sensitive



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

Laboratory Procedures

Vitamin K₁ is supplied as a neat oil. A stock solution may be made by dissolving the Vitamin K₁ in the solvent of choice, which should be purged with an inert gas. Vitamin K₁ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of Vitamin K₁ in these solvents is approximately 25 mg/ml.

Description

Vitamin K₁ is a fat-soluble, dietary nutrient that is essential for the synthesis of proteins important for blood-clotting, bone metabolism, and cell growth.¹ It is found in the photosynthetic tissues of green, leafy plants, where it acts as an electron acceptor forming part of the electron transport chain of Photosystem I.² Vitamin K₁ also serves as a precursor to vitamin K₂ and is reported to exhibit anticancer activity in various cell lines.^{3,4}

References

1. Plaza, S.M. and Lamson, D.W. Vitamin K₂ in bone metabolism and osteoporosis. *Altern. Med. Rev.* **10**(1), 24-35 (2005).
2. Santabarbara, S., Heathcote, P., and Evans, M.C.W. Modelling of the electron transfer reactions in Photosystem I by electron tunnelling theory: The phylloquinones bound to the PsaA and the PsaB reaction centre subunits of PS I are almost isoenergetic to the iron-sulfur cluster F_X. *Biochim. Biophys. Acta* **1708**(3), 283-310 (2005).
3. Beulens, J.W.J., Booth, S.L., van den Heuvel, E.G.H.M., et al. The role of menaquinones (vitamin K₂) in human health. *Br. J. Nutr.* **110**(8), 1357-1368 (2013).
4. Lamson, D.W. and Plaza, S.M. The anticancer effects of vitamin K. *Altern. Med. Rev.* **8**(3), 303-318 (2003).

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.

WARRANTY AND LIMITATION OF REMEDY

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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