Vitamin K1-$^{13}C_6$

Cat. No.: HY-N0684S3

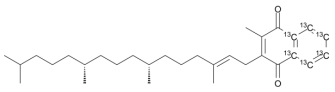
Molecular Formula: $C_{25}{}^{13}C_6H_{42}O_2$

Molecular Weight: 452.62

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: -80°C



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 25 mg/mL (55.23 mM)
DMF : ≥ 25 mg/mL (55.23 mM)
DMSO : ≥ 25 mg/mL (55.23 mM)
Ethanol : ≥ 25 mg/mL (55.23 mM)
Ethanol : ≥ 25 mg/mL (55.23 mM)
DMF : ≥ 25 mg/mL (55.23 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.2094 mL	11.0468 mL	22.0936 mL
5 mM	0.4419 mL	2.2094 mL	4.4187 mL
10 mM	0.2209 mL	1.1047 mL	2.2094 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Vitamin K1-$^{13}C_6$ is the ^{13}C-labeled Vitamin K1. Vitamin K1 a naturally occurring vitamin required for blood coagulation and bone and vascular metabolism.

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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[4]. Ibarrola-Jurado N, et al. Dietary phylloquinone intake and risk of type 2 diabetes in elderly subjects at high risk of cardiovascular disease. Am J Clin Nutr. 2012 Nov;96(5):1113-8.

[5]. Kim M, et al. Vitamin K1 (phylloquinone) and K2 (menaquinone-4) supplementation improves bone formation in a high-fat diet-induced obese mice. J Clin Biochem Nutr. 2013 Sep;53(2):108-13.

[6]. Hemmati AA, et al. Topical vitamin K1 promotes repair of full thickness wound in rat. Indian J Pharmacol. 2014 Jul-Aug;46(4):409-12.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA