

Product Data Sheet

Product Name: Retinol-d4

Cat. No.: GC71693

Chemical Properties

Cas. No. 118063-12-0

Formula C₂₀H₂₆D₄O

M.Wt 290.48

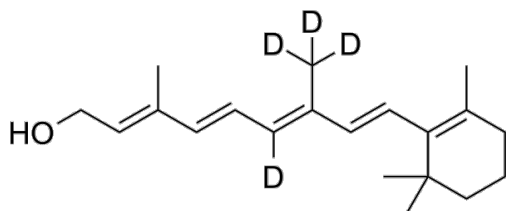
Solubility DMSO : 1 mg/mL (3.44 mM; Need ultrasonic; Hygroscopic DMSO has a significant impact on the solubility of product, please use newly opened DMSO); H₂O : 0.67 mg/mL (2.31 mM; Need ultrasonic)

Storage -80°C, protect from light, stored under nitrogen

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

Retinol-d4 (Vitamin A1-d4; all-trans-Retinol-d4) is the deuterium labeled Vitamin A. Retinol is an endogenous metabolite.

Caution: Product has not been fully validated for medical applications. For research use only.

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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].

References:

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.
- [2]. Zhang M, et al. High-fat diet enhanced retinal dehydrogenase activity, but suppressed retinol dehydrogenase activity in liver of rats. *J Pharmacol Sci*. 2015 Apr;127(4):430-8.
- [3]. Miyazaki H, et al. Retinol status and expression of retinol-related proteins in methionine-choline deficient rats. *J Nutr Sci Vitaminol (Tokyo)*. 2014;60(2):78-85.

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