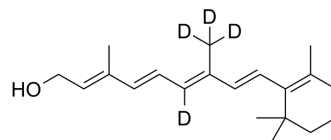


Retinol-d₄

Cat. No.:	HY-B1342S2
CAS No.:	118063-12-0
Molecular Formula:	C ₂₀ H ₂₆ D ₄ O
Molecular Weight:	290.48
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	-80°C, protect from light, stored under nitrogen



SOLVENT & SOLUBILITY

In Vitro

DMSO : 1 mg/mL (3.44 mM; Need ultrasonic)
 H₂O : 0.67 mg/mL (2.31 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.4426 mL	17.2129 mL	34.4258 mL
	5 mM	---	---	---
	10 mM	---	---	---
	---	---	---	---

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

BIOLOGICAL ACTIVITY

Description

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

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

- [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.

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

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