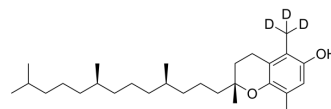


β-Tocopherol-d₃

Cat. No.:	HY-113068S
CAS No.:	936230-75-0
Molecular Formula:	C ₂₈ H ₄₅ D ₃ O ₂
Molecular Weight:	419.7
Target:	Tyrosinase; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	β-Tocopherol-d ₃ is the deuterium labeled β-Tocopherol. β-Tocopherol is an analogue of vitamin E, exhibits antioxidant properties. β-Tocopherol can inhibit tyrosinase activity and melanin synthesis. β-Tocopherol can also prevent the inhibition of cell growth and of PKC activity caused by d-alpha-tocopherol[1][2][3].
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]. Azzi A, et, al. d-alpha-tocopherol control of cell proliferation. *Mol Aspects Med.* 1993; 14(3): 265-71.
- [3]. Tasinato A, et, al. d-alpha-tocopherol inhibition of vascular smooth muscle cell proliferation occurs at physiological concentrations, correlates with protein kinase C inhibition, and is independent of its antioxidant properties. *Proc Natl Acad Sci U S A.* 1995 Dec 19; 92(26): 12190-4.
- [4]. Kamei Y, et, al. Comparison of the inhibitory effects of vitamin E analogues on melanogenesis in mouse B16 melanoma cells. *Cytotechnology.* 2009 Apr; 59(3): 183-90.

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

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