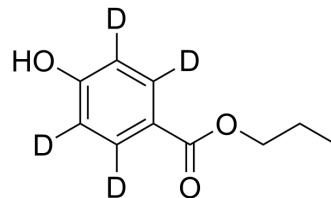


Propylparaben-d₄

Cat. No.:	HY-N2026S1
CAS No.:	1219802-67-1
Molecular Formula:	C ₁₀ H ₈ D ₄ O ₃
Molecular Weight:	184.23
Target:	Apoptosis; Bacterial; Endogenous Metabolite
Pathway:	Apoptosis; Anti-infection; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Propylparaben-d ₄ is the deuterium labeled Propylparaben[1]. Propylparaben (Propyl parahydroxybenzoate) is an antimicrobial preservative which can be produced naturally by plants and bacteria. Propylparaben is prevalently used in cosmetics, pharmaceuticals, and foods. Propylparaben disrupts antral follicle growth and steroidogenic function by altering the cell-cycle, apoptosis, and steroidogenesis pathways. Propylparaben also decreases sperm number and motile activity in rats[2][3][4].
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 Feb;53(2):211-216.
- [2]. S Oishi, et al. Effects of propyl paraben on the male reproductive system. *Food Chem Toxicol*. 2002 Dec;40(12):1807-13.
- [3]. Gal A, et, al. Propylparaben inhibits mouse cultured antral follicle growth, alters steroidogenesis, and upregulates levels of cell-cycle and apoptosis regulators. *Reprod Toxicol*. 2019 Oct89:100-106.
- [4]. Final amended report on the safety assessment of Methylparaben, Ethylparaben, Propylparaben, Isopropylparaben, Butylparaben, Isobutylparaben, and Benzylparaben as used in cosmetic products. *Int J Toxicol*. 200827 Suppl 4:1-82.

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

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