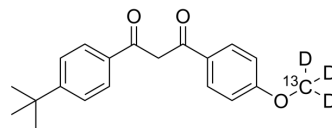


Avobenzene-¹³C,₃D₃

Cat. No.:	HY-B0316S
Molecular Formula:	C ₁₉ ¹³ CH ₁₉ D ₃ O ₃
Molecular Weight:	314.4
Target:	Estrogen Receptor/ERR; Apoptosis; Isotope-Labeled Compounds
Pathway:	Vitamin D Related/Nuclear Receptor; Apoptosis; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Avobenzene- ¹³ C, ₃ D ₃ is the ¹³ C- and deuterium labeled Avobenzene. Avobenzene, a dibenzoylmethane compound, is one of the most widely used filters in sunscreens for skin photoprotection in the UVA band. Avobenzene is an endocrine disruptor that directly binds to estrogen receptor β and acts as an estrogen agonist[1][2].
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 ^[40] . 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):211-223.
- [2]. Ahn S, An S, et al. A long-wave UVA filter avobenzene induces obesogenic phenotypes in normal human epidermal keratinocytes and mesenchymal stem cells. *Arch Toxicol.* 2019;93(7):1903-1915.
- [3]. Kojić M, et al. A new insight into the photochemistry of avobenzene in gas phase and acetonitrile from ab initio calculations. *Phys Chem Chem Phys.* 2016;18(32):22168-22178.
- [4]. Schreurs RH, et al. Interaction of polycyclic musks and UV filters with the estrogen receptor (ER), androgen receptor (AR), and progesterone receptor (PR) in reporter gene bioassays. *Toxicol Sci.* 2005;83(2):264-272.
- [5]. Yang C, et al. Avobenzene suppresses proliferative activity of human trophoblast cells and induces apoptosis mediated by mitochondrial disruption. *Reprod Toxicol.* 2018;81:50-57.

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

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