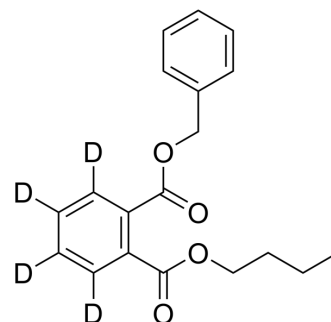


## Benzyl butyl phthalate-d<sub>4</sub>

Cat. No.:	HY-W011338S		
CAS No.:	93951-88-3		
Molecular Formula:	C <sub>19</sub> H <sub>16</sub> D <sub>4</sub> O <sub>4</sub>		
Molecular Weight:	316.38		
Target:	Aryl Hydrocarbon Receptor		
Pathway:	Immunology/Inflammation		
Storage:	Pure form	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### BIOLOGICAL ACTIVITY

Description	Benzyl butyl phthalate-d <sub>4</sub> is the deuterium labeled Benzyl butyl phthalate[1]. Benzyl butyl phthalate, a member of phthalic acid esters (PAEs), can trigger the migration and invasion of hemangioma (HA) cells via upregulation of Zeb1. Benzyl butyl phthalate activates aryl hydrocarbon receptor (AhR) in breast cancer cells to stimulate SPHK1/S1P/S1PR3 signaling and enhances formation of metastasis-initiating breast cancer stem cells (BCSCs)[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 <sup>[1]</sup> . 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]. Sun G, et al. Developmental toxicity and cardiac effects of butyl benzyl phthalate in zebrafish embryos. *Aquat Toxicol*. 2017;192:165-170.
- [3]. Cui S, et al. Benzyl butyl phthalate (BBP) triggers the migration and invasion of hemangioma cells via upregulation of Zeb1. *Toxicol In Vitro*. 2019;60:323-329.
- [4]. Wang YC, et al. Benzyl butyl phthalate promotes breast cancer stem cell expansion via SPHK1/S1P/S1PR3 signaling. *Oncotarget*. 2016;7(20):29563-29576.

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

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