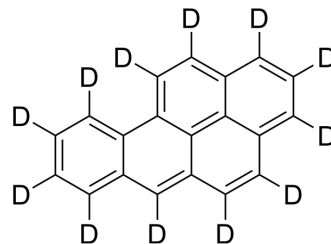


## Benzo[a]pyrene-d<sub>12</sub>

<b>Cat. No.:</b>	HY-107377S
<b>CAS No.:</b>	63466-71-7
<b>Molecular Formula:</b>	C <sub>20</sub> D <sub>12</sub>
<b>Molecular Weight:</b>	264.38
<b>Target:</b>	Endogenous Metabolite
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Benzo[a]pyrene-d <sub>12</sub> is the deuterium labeled Benzo[a]pyrene[1]. Benzo[a]pyrene shows lung carcinogenicity in animal models, and it is frequently used in chemoprevention studies[2][3].
<b>In Vitro</b>	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]. Saeko Onami, et al. Dosimetry for lung tumorigenesis induced by urethane, 4-(N-methyl-N-nitrosamino)-1-(3-pyridyl)-1-butanone (NNK), and benzo[a]pyrene (B[a]P) in A/JJmsSlc mice. *J Toxicol Pathol*. 2017 Jul; 30(3): 209–216.
- [3]. Yeo CD, et al. Roflumilast treatment inhibits lung carcinogenesis in benzo(a)pyrene-induced murine lung cancer model. *Eur J Pharmacol*. 2017 Oct 5812:189

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

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