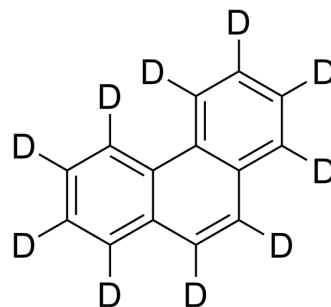


Phenanthrene-d₁₀

Cat. No.:	HY-B1727S		
CAS No.:	1517-22-2		
Molecular Formula:	C ₁₄ D ₁₀		
Molecular Weight:	188.29		
Target:	Isotope-Labeled Compounds		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (531.10 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	5.3110 mL	26.5548 mL	53.1096 mL
5 mM	1.0622 mL	5.3110 mL	10.6219 mL
10 mM	0.5311 mL	2.6555 mL	5.3110 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Phenanthrene-d₁₀ is the deuterium labeled Phenanthrene. Phenanthrene is a polycyclic aromatic hydrocarbon (PAH) and has been frequently used as an indicator for monitoring PAH contaminated matrices[1]. Phenanthrene induces oxidative stress and inflammation[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^[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]. Sun K, et al. Subcellular distribution and biotransformation of phenanthrene in pakchoi after inoculation with endophytic *Pseudomonas* sp. as probed using HRMS coupled with isotope-labeling. *Environ Pollut.* 2018 Jun;237:858-867.; Dupuy J, et al. Effect and localization of phenanthrene in maize roots. *Chemosphere.* 2016 Apr;149:130-6.

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

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