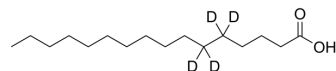


Palmitic acid-d₄-1

Cat. No.:	HY-N0830S12		
CAS No.:	75736-47-9		
Molecular Formula:	C ₁₆ H ₂₈ D ₄ O ₂		
Molecular Weight:	260.45		
Target:	HSP; Endogenous Metabolite		
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

Ethanol : ≥ 30 mg/mL (115.19 mM)
 Ethanol : ≥ 30 mg/mL (115.19 mM)
 DMSO : ≥ 20 mg/mL (76.79 mM)
 DMF : ≥ 20 mg/mL (76.79 mM)
 DMSO : ≥ 20 mg/mL (76.79 mM)
 DMF : ≥ 20 mg/mL (76.79 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM	3.8395 mL	19.1975 mL	38.3951 mL
	5 mM	0.7679 mL	3.8395 mL	7.6790 mL	
	10 mM	0.3840 mL	1.9198 mL	3.8395 mL	

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

BIOLOGICAL ACTIVITY

Description

Palmitic acid-d₄-1 is the deuterium labeled Palmitic acid. Palmitic acid is a long-chain saturated fatty acid commonly found in both animals and plants. PA can induce the expression of glucose-regulated protein 78 (GRP78) and CCAAT/enhancer binding protein homologous protein (CHOP) in in mouse granulosa cells[1][2][3].

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]. Harada H, et al. Antitumor activity of palmitic acid found as a selective cytotoxic substance in a marine red alga. *Anticancer Res*. 2002 Sep-Oct;22(5):2587-90.
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Caution: Product has not been fully validated for medical applications. For research use only.

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