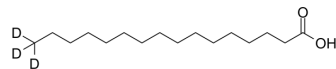


Palmitic acid-d3

Cat. No.:	HY-N0830S5		
CAS No.:	75736-53-7		
Molecular Formula:	C ₁₆ H ₂₉ D ₃ O ₂		
Molecular Weight:	259.44		
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	DMSO : 100 mg/mL (385.45 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.8545 mL	19.2723 mL	38.5446 mL
		5 mM	0.7709 mL	3.8545 mL	7.7089 mL
		10 mM	0.3854 mL	1.9272 mL	3.8545 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (9.64 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (9.64 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Palmitic acid-d3 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]} .
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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