Palmitic acid sodium

Cat. No.: HY-N0830B

CAS No.: 408-35-5

Molecular Formula: $C_{16}H_{31}NaO_2$

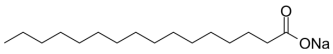
Molecular Weight: 278.41

Target: Biochemical Assay Reagents; HSP; Endogenous Metabolite

Pathway: Others; Cell Cycle/DNA Damage; Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 8.33 mg/mL (29.92 mM; ultrasonic and warming and adjust pH to 4 with 1M HCl and heat to 60°C)

H_2O : < 0.1 mg/mL (ultrasonic;warming;heat to 44°C) (insoluble)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.5918 mL	17.9591 mL	35.9182 mL
	5 mM	0.7184 mL	3.5918 mL	7.1837 mL
	10 mM	0.3592 mL	1.7959 mL	3.5918 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: ≥ 1.11 mg/mL (3.99 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Palmitic acid sodium is a long-chain saturated fatty acid commonly found in both animals and plants. Palmitic acid sodium can induce the expression of glucose-regulated protein 78 (GRP78) and CCAAT/enhancer binding protein homologous protein (CHOP) in in mouse granulosa cells. Palmitic acid sodium is used to establish a cell steatosis model [1][2].

In Vitro

Palmitic acid sodium (0.1, 0.25 or 0.5 mM; 12-72 h) increases the mRNA levels of Notch1, ?2 and ?4 in LX2, Huh7 and MIHA hepatic cell lines. Palmitic acid sodium is dissolved in DMEM containing 1% BSA and filtered through a 0.22-μm filter, then added to the cells[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Discov. 2023 Mar 7;9(1):26.
- Bioact Mater. 2024 Mar, 33, 85-99.
- Adv Sci (Weinh). 2023 Oct;10(28):e2302130.
- Gut Microbes. 2022, 14(1): 2139978.
- Cardiovasc Diabetol. 2023 May 6;22(1):107.

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REFERENCES

[1]. Harada H, et al. Antitumor activity ofpalmitic acid found as a selective cytotoxic substance in a marine red alga.Anticancer Res. 2002 Sep-Oct;22(5):2587-90.

[2]. Wen-Jin Ding,et al. Expression of Notch family is altered in non-alcoholic fattyliver disease. Mol Med Rep. 2020 Sep;22(3):1702-1708.

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