Data Sheet (Cat.No.T37679)

TargetMol

3-Hydroxy Palmitic Acid

Chemical Properties

CAS No. : 2398-34-7

Formula: C16H32O3

Molecular Weight: 272.42

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	3-Hydroxy Palmitic Acid is a saturated fatty acid containing 16 carbon atoms with a hydroxyl group at the 3-position. Its main functions include serving as a biomarker for endotoxin (lipid A) and as a quorum-sensing signaling molecule in bacteria. Additionally, this compound accumulates and causes toxicity in certain mitochondrial metabolic defects.
Targets(IC50)	Others,Endogenous Metabolite

Solubility Information

Solubility	DMSO:PBS(pH 7.2) (1:2): 0.33 mg/mL (1.21 mM),Sonication is recommended. Ethanol: 2.5 mg/mL (9.18 mM),Sonication is recommended. DMSO: 80 mg/mL (293.66 mM),Sonication is recommended. DMF: 20 mg/mL (73.42 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2 mg/mL (7.34 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6708 mL	18.354 mL	36.708 mL
5 mM	0.7342 mL	3.6708 mL	7.3416 mL
10 mM	0.3671 mL	1.8354 mL	3.6708 mL
50 mM	0.0734 mL	0.3671 mL	0.7342 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Ribas GS, et alR. Evidence that Oxidative Disbalance and Mitochondrial Dysfunction are Involved in the Pathophysiology of Fatty Acid Oxidation Disorders. Cell Mol Neurobiol. 2022 Apr;42(3):521-532.