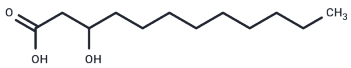
Data Sheet (Cat.No.T19120)

TargetMol

3-Hydroxydodecanoic acid

Chemical Properties



CAS No. : 1883-13-2

Formula: C12H24O3

Molecular Weight: 216.32

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-Hydroxydodecanoic acid is a long-chain fatty acid and endogenous metabolite that accumulates in rat brains, inducing oxidative stress, lipid peroxidation, and protein oxidative damage, while reducing GSH levels, making it useful for studying neurological symptoms.
Targets(IC50)	Endogenous Metabolite,Lipid
In vitro	**Methods**: 3-Hydroxydodecanoic acid (1-100 μM, 1 h) was used to treat thiobarbituric acid-reactive substances (TBA-RS) in rat cerebral cortex homogenate and its effects were observed. **Results**: 3-Hydroxydodecanoic acid induced lipid peroxidation in rat cerebral cortex and increased the level of TBA-RS. [1]

Solubility Information

Solubility	DMSO: 80 mg/mL (369.82 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (15.26 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	4.6228 mL	23.1139 mL	46.2278 mL
5 mM	0.9246 mL	4.6228 mL	9.2456 mL
10 mM	0.4623 mL	2.3114 mL	4.6228 mL
50 mM	0.0925 mL	0.4623 mL	0.9246 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

Tonin AM, et al. Long-chain 3-hydroxy fatty acids accumulating in LCHAD and MTP deficiencies induce oxidative stress in rat brain. Neurochem Int. 2010 Jul;56(8):930-6.