

Dodecane

Chemical Properties

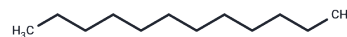
CAS No. : 112-40-3

Formula: C₁₂H₂₆

Molecular Weight: 170.33

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Dodecane is a straight-chain alkane primarily used as a fuel, reference standard substance, and solvent, capable of upregulating TNF- α expression in rat skin irritation.
Targets(IC50)	Others,TNF
In vivo	Methods: Hairless rats (CD HrBi rats) were treated with dodecane (230 μ L, topical, single dose, 1 hour) to investigate the effects of dodecane on skin irritation (erythema), transepidermal water loss (TEWL), and expression of interleukin-1 α (IL-1 α), tumor necrosis factor (TNF- α), and monocyte chemoattractant protein-1 (MCP-1) in the skin and blood. Results: Dodecane induced high transepidermal water loss and increased TNF- α expression in the CD HrBi rat model. [1]

Solubility Information

Solubility	DMSO: 15 mg/mL (88.06 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.871 mL	29.3548 mL	58.7096 mL
5 mM	1.1742 mL	5.871 mL	11.7419 mL
10 mM	0.5871 mL	2.9355 mL	5.871 mL
50 mM	0.1174 mL	0.5871 mL	1.1742 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

Babu, R. J., et al., (2004). Assessment of skin irritation and molecular responses in rat skin exposed to nonane, dodecane and tetradecane. Toxicology letters, 153(2), 255-266.

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