

N-Oleoyl-L-Serine

Chemical Properties

CAS No. : 107743-37-3

Formula: C₂₁H₃₉NO₄

Molecular Weight: 369.54

Storage: Store at low temperature, Keep away from direct sunlight
 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	N-Oleoyl-L-Serine (N-Oleoylserine) is an endogenous long-chain fatty acid amide that is a lipid modulator of bone remodeling and stimulates osteoclast apoptosis which can be used to study osteoporosis. N-Oleoyl-L-Serine showed high activity in an osteoblast proliferation assay. N-Oleoyl-L-Serine promotes osteoclast apoptosis by inhibiting Erk1/2 phosphorylation and expression of nuclear κ B ligand (RANKL) receptor activator in bone marrow stromal cells and osteoblasts, which attenuates osteoclast populations.
Targets(IC50)	Apoptosis

Solubility Information

Solubility	Ethanol:PBS (pH 7.2) (1:1): 0.5 mg/mL (1.35 mM), Sonication is recommended. DMF: 4 mg/mL (10.82 mM), Sonication is recommended. DMSO: 137.5 mg/mL (372.08 mM), Sonication is recommended. Ethanol: 4 mg/mL (10.82 mM), Sonication is recommended. Ethanol:PBS pH 7.2 (1:1): < 1 mg/mL (insoluble or slightly soluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (27.06 mM), Solution. 10% DMSO+90% Saline: < 10 mg/mL (27.06 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7061 mL	13.5303 mL	27.0607 mL
5 mM	0.5412 mL	2.7061 mL	5.4121 mL
10 mM	0.2706 mL	1.353 mL	2.7061 mL
50 mM	0.0541 mL	0.2706 mL	0.5412 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

Reem Smoum, et al. Oleoyl serine, an endogenous N-acyl amide, modulates bone remodeling and mass. Proc Natl Acad Sci U S A. 2010 Oct 12;107(41):17710-5.

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