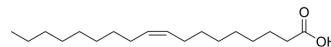


Oleic acid

Cat. No.:	HY-N1446		
CAS No.:	112-80-1		
Molecular Formula:	C ₁₈ H ₃₄ O ₂		
Molecular Weight:	282.46		
Target:	Na ⁺ /K ⁺ ATPase; Endogenous Metabolite; Apoptosis		
Pathway:	Membrane Transporter/Ion Channel; Metabolic Enzyme/Protease; Apoptosis		
Storage:	Pure form	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 100 mg/mL (354.03 mM; Need ultrasonic)
 0.1 M NaOH : 100 mg/mL (354.03 mM; Need ultrasonic)
 DMSO : ≥ 62.5 mg/mL (221.27 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.5403 mL	17.7016 mL	35.4032 mL
	5 mM	0.7081 mL	3.5403 mL	7.0806 mL
	10 mM	0.3540 mL	1.7702 mL	3.5403 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (8.85 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (8.85 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (8.85 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (7.36 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (7.36 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (7.36 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Oleic acid (9-cis-Octadecenoic acid) is an abundant monounsaturated fatty acid ^[1] . Oleic acid is a Na ⁺ /K ⁺ ATPase activator ^[2] .
IC₅₀ & Target	Human Endogenous Metabolite
In Vitro	Oleic acid is the most common monounsaturated fatty acids (FA) in human adipocytes and other tissues. Oleic acid prompts cell proliferation and migration in high metastatic cancer cells via enhancing β -oxidation mediated by AMPK activation. Oleic acid inhibits cancer cell growth and survival in low metastatic carcinoma cells, such as gastric carcinoma SGC7901 and breast carcinoma MCF-7 cell lines ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Extracell Vesicles. 2024 Jan;13(1):e12401.
- Adv Sci (Weinh). 2023 Oct;10(28):e2302130.
- Redox Biol. 15 October 2021, 102168.
- Redox Biol. 2021 Jan;38:101807.
- J Exp Clin Cancer Res. 2019 Jul 10;38(1):300.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Jack-Hays MG, et al. Activation of Na⁺/K⁺-ATPase by fatty acids, acylglycerols, and related amphiphiles: structure-activity relationship. Biochim Biophys Acta. 1996 Feb 21;1279(1):43-8.

[2]. Li S, et al. High metastatic gastric and breast cancer cells consume oleic acid in an AMPK dependent manner. PLoS One. 2014 May 13;9(5):e97330.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA