Lecithin

Cat. No.: HY-B2235

CAS No.: 8002-43-5

Molecular Formula: $C_{42}H_{80}NO_8P$

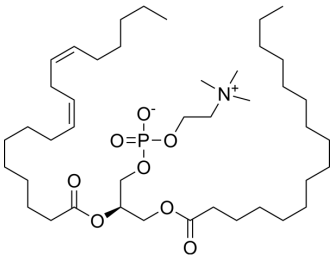
Molecular Weight: 758.06

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 10 mg/mL (13.19 mM; Need ultrasonic)
DMSO : 5 mg/mL (6.60 mM; ultrasonic and warming and heat to 60°C)
Ethanol : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3192 mL	6.5958 mL	13.1916 mL
	5 mM	0.2638 mL	1.3192 mL	2.6383 mL
	10 mM	0.1319 mL	0.6596 mL	1.3192 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 0.5 mg/mL (0.66 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.5 mg/mL (0.66 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.5 mg/mL (0.66 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lecithin is regarded as a safe, conventional phospholipid source. Phospholipids are reported to alter the fatty acid composition and microstructure of the membranes in animal cells.

IC_{50} & Target	Microbial Metabolite	Human Endogenous Metabolite

In Vitro	After culturing in MRS broth with 0.2 to 1.0% soy Lecithin, the survival rate of harvested cells increases significantly (P<0.05) in the 0.3% bile challenge compare with the no added soy Lecithin group. The cells incubated with 0.6% soy Lecithin are able to grow in an MRS broth with a higher bile salt content. The cell surface hydrophobicity is enhanced and the membrane integrity in the bile challenge increases after culturing with soy Lecithin. A shift in the fatty acid composition is also observed, illustrating the cell membrane changes in the soy Lecithin culture[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	MRS broths are supplemented with soy Lecithin concentrations of 0, 0.2, 0.4, 0.6, 0.8 and 1.0%. Each broth is inoculated with a tested strain culture (2%, v/v) and anaerobically incubated at 37°C for 20 h. After incubation, the bacterium cells are harvested by centrifugation at 8000 g for 10 min at 4°C and washed twice in PBS (pH 6.5) plus ethanol (5%, v/v). Strain bile resistance is assessed. The numbers of viable cells are counted by the pouring plate method, and each batch is tested three times[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Adv Sci (Weinh). 2024 Jan 17:e2307870.
- Biomater Res. 2022 Sep 22;26(1):47.
- J Funct Foods. 2024 Feb, 113, 106041.
- Authorea. 2023 Jul 18.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Hu B, et al. Enhancement of bile resistance in Lactobacillus plantarum strains by soy lecithin. Lett Appl Microbiol. 2015 Jul;61(1):13-9.

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