Data Sheet (Cat.No.T32959)

TargetMol

Lunularin

Chemical Properties

CAS No. :	37116-80-6
Formula:	C14H14O2
Molecular Weight:	214.26
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	Lunularin is a naturally occurring bibenzyl compound widely distributed in liverworts (such as Conocephalum conicum) and is also a major gut microbiota-derived metabolite of resveratrol. Research indicates that Lunularin possesses significant antioxidant and anti-inflammatory properties and can selectively inhibit 11beta-hydroxysteroid dehydrogenase 1 (11beta-HSD1). Due to its role in regulating glucocorticoid activation and metabolic homeostasis, this molecule is of great interest in studies involving metabolic diseases, skin health, and neuroprotection.
Targets(IC50)	Endogenous Metabolite,Dehydrogenase
In vitro	Lunularin demonstrates potent and selective inhibitory activity against human and rat 11beta-HSD1 in cell-based assays and exhibits strong radical scavenging capabilities to reduce oxidative stress [2][3].
In vivo	In animal models, Lunularin contributes significantly to the health-promoting effects of resveratrol, showing the potential to regulate metabolic parameters and mitigate systemic inflammation [2].

Solubility Information

Solubility	DMSO: 80 mg/mL (373.38 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.6672 mL	23.3361 mL	46.6723 mL
5 mM	0.9334 mL	4.6672 mL	9.3345 mL
10 mM	0.4667 mL	2.3336 mL	4.6672 mL
50 mM	0.0933 mL	0.4667 mL	0.9334 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

Suire C, et al. Chirality of terpenoids isolated from the liverwort Conocephalum Conicum[J]. Phytochemistry, 1982, 21(2): 349-352.

Li F, et al. Gut Microbiota-Derived Resveratrol Metabolites, Dihydroresveratrol and Lunularin, Significantly Contribute to the Biological Activities of Resveratrol. Front Nutr. 2022 May 11;9:912591.

Hu C, et al. Resveratrol analogues and metabolites selectively inhibit human and rat 11β-hydroxysteroid dehydrogenase 1 as the therapeutic drugs: structure-activity relationship and molecular dynamics analysis. SAR QSAR Environ Res. 2024 Ju

Bode LM, Bunzel D, Huch M, Cho GS, Ruhland D, Bunzel M, Bub A, Franz CM, Kulling SE. In vivo and in vitro metabolism of trans-resveratrol by human gut microbiota. Am J Clin Nutr. 2013 Feb;97(2):295-309. doi: 10.3945/ajcn.112.049379. Epub 2013 Jan 2. PubMed PMID: 23283496.