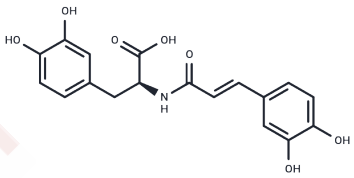
Data Sheet (Cat.No.T26288)

TargetMol

Clovamide

Chemical Properties



CAS No. : 53755-02-5

Formula: C18H17NO7

Molecular Weight: 359.33

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	Trans-Clovamide (trans-Clovamide) is a naturally occurring caffeoyl conjugate identified in the antioxidant polyphenolic fraction of cocoa (T. cacao L.) Trans-Clovamide is a potent antioxidantand that has shown neuroprotective effects (EC50s = 0.9-3.7 μM) in several in vitro models of neuronal death. Trans-Clovamide is an excellent ROS and oxygen radical scavenger and also has anti-inflammatory and neuroprotective effects. Clovamide is an anti-microbial with activity against the human pathogens influenza A subtype H5N1, Trypanosoma evansi, and Heliobacter pylori.
Targets(IC50)	Apoptosis,Reactive Oxygen Species,Antibacterial,Influenza Virus,ROS
In vitro	Clovamide protects neurons from injury in three in vitro models of neuronal death: oxidative stress, excitotoxicity and OGD/reoxygenation. In SH-SY5Y human neuroblastoma cells, Clovamide (10-100 μM) protects cell death significantly with an EC50 value of 3.6 μM. Clovamide inhibits growth of three pathogens of cacao in the genus?Phytophthora, is a substrate for cacao polyphenol oxidase, and is a contributor to enzymatic browning. Clovamide inhibits proteinase and pectinase in vitro. Clovamide also enhances PPARγ expression.

Solubility Information

Solubility	DMSO: 150 mg/mL (417.44 mM),Sonication and heating to 60°C are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (11.13 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.783 mL	13.9148 mL	27.8296 mL
5 mM	0.5566 mL	2.783 mL	5.5659 mL
10 mM	0.2783 mL	1.3915 mL	2.783 mL
50 mM	0.0557 mL	0.2783 mL	0.5566 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

Naike Ye, et al. Antioxidant studies by hydrodynamic voltammetry and DFT, quantitative analyses by HPLC-DAD of clovamide, a natural phenolic compound found in Theobroma Cacao L. beans. Food Chem. 2021 Mar 30;341(Pt 2): 128260.

S Fallarini, et al. Clovamide and rosmarinic acid induce neuroprotective effects in in vitro models of neuronal death. Br J Pharmacol. 2009 Jul;157(6):1072-84.