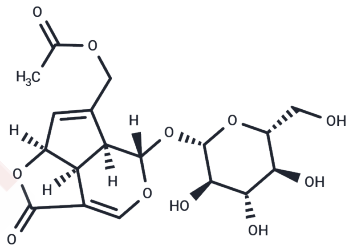
Data Sheet (Cat.No.T3847)

TargetMol

Asperuloside

Chemical Properties



CAS No. : 14259-45-1

Formula: C18H22O11

Molecular Weight: 414.36

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	Asperuloside (Asperulosid) has anti-inflammatory activity.
Targets(IC50)	NO Synthase
Kinase Assay	The chemiluminescent assay is used to confirm PCSEE MAO-A and MAO-B inhibitory effects and to test BNN and BVN hMAO-A and hMAO-B inhibition using MAO-Glo kit. Each enzyme's Arbitrary Light Unit (ALU) is measured in the presence of PCSEE, BNN, BVN, and standard DEP as an MAO-BI positive control. Briefly, hMAO-A and hMAO-B isozymes are diluted to 2× with reaction buffer (pH 7.4) and preincubated with 4× PCSEE, BNN, BVN, or DEP working solutions at RT for 30?min in white opaque 96-well plates. For determining activity inhibition, final 8.5?μg/mL concentrations of PCSEE, BNN, BVN, and DEP are used. For IC50 determination, 8× PCSEE and BNN working solutions are serially diluted using reaction buffers (pH 7.4) to make a 4× concentration. Ten points' range of PCSEE (1.0 to 250.0?μg/mL) and BNN (up to 400?μM (135.4?μg/mL)) final concentrations is used. Controls used are with and without ethanol. Ethanol solvent in controls is kept to a maximum final (volume) of ≤2%. Each isozyme is substituted with the reaction buffer for the blank. Based on our preliminary optimizations and Valley's method, the reaction is initiated by adding 4× luciferin derivative substrate (LDS) for a final (concentration) of 40 and 4?μM for hMAO-A and hMAO-B reactions, respectively. The final volume per well of each reaction is 50?μL. The reaction is optimized for the amount of A and B enzyme used to be incubated for less than 3.5?h at RT. To stop the reaction and produce the luminescence signal RLDR is added to all wells, 50?μL to each well, and incubated for a further 30?min.

Solubility Information

Solubility	DMSO: 255 mg/mL (615.41 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.83 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4134 mL	12.0668 mL	24.1336 mL
5 mM	0.4827 mL	2.4134 mL	4.8267 mL
10 mM	0.2413 mL	1.2067 mL	2.4134 mL
50 mM	0.0483 mL	0.2413 mL	0.4827 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

Fujikawa T,et al. Asperuloside stimulates metabolic function in rats across several organs under high-fat diet conditions, acting like the major ingredient of Eucommia leaves with anti-obesity activity. J Nutr Sci. 2012 Sep 5;1: e10.

Venditti A,et al. Monoterpenoids glycosides content from two Mediterranean populations of Crucianella maritima L. Nat Prod Res. 2014;28(8):586-8.