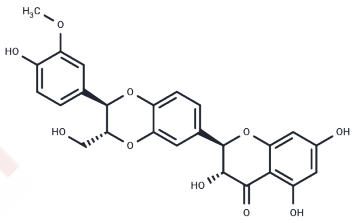
Data Sheet (Cat.No.TN1804)

TargetMol

Isosilybin A

Chemical Properties



CAS No. : 142796-21-2

Formula: C25H22O10

Molecular Weight: 482.44

Storage: Store at low temperature,Keep away from direct sunlight
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	Isosilybin A is a partial PPARγ agonist, it significantly induced ABCA1 protein expression, it inhibited both monophenolase (IC50=1.7-7.6μM) and diphenolase (IC50=12.1-44.9μM) of tyrosinase. Isosilybin A shows anti-angiogenic efficacy, it has anti-prostate cancer (PCA) activity that is mediated via cell cycle arrest and apoptosis induction.
Targets(IC50)	Apoptosis,ERK,NF-κB,Androgen Receptor,ABC Transporter,p38 MAPK,PPAR,Tyrosinase
In vitro	To investigate the effects of milk thistle extract and its main flavonolignans (silybin A, silybin B, Isosilybin A and isosilybin B) on CYP2C8 activity at relevant concentrations, the effect of milk thistle extract and the flavonolignans on CYP2C8 enzyme activity was studied in vitro using human liver microsomes (HLM) incorporating an enzyme-selective substrate for CYP2C8, amodiaquine. Metabolite formation was analyzed using liquid chromatography-tandem mass spectrometry (LC/MS-MS). The concentration causing 50% inhibition of enzyme activity (IC50) was used to express the degree of inhibition. Isosilibinin, a mixture of the diastereoisomers Isosilybin A and isosilybin B, was found to be the most potent inhibitor, followed by isosilybin B with IC50 values (mean ± SE) of 1.64 ± 0.66 μg/mL and 2.67 ± 1.18 μg/mL, respectively. The rank order of observed inhibitory potency after isosilibinin was silibinin > Isosilybin A > silybin A > milk thistle extract > and silybin B[1]

Solubility Information

Solubility	DMSO: 100 mg/mL (207.28 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: 3.3 mg/mL (6.84 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	2.0728 mL	10.364 mL	20.728 mL
5 mM	0.4146 mL	2.0728 mL	4.1456 mL
10 mM	0.2073 mL	1.0364 mL	2.0728 mL
50 mM	0.0415 mL	0.2073 mL	0.4146 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

The effect of milk thistle (Silybum marianum) and its main flavonolignans on CYP2C8 enzyme activity in human liver microsomes.Chem Biol Interact. 2017 Jun 1;271:24-29.