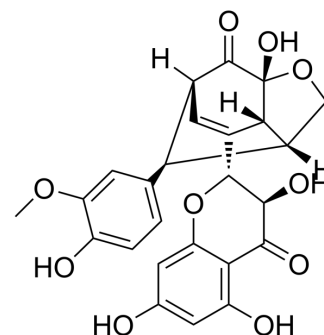


## Silydianin

<b>Cat. No.:</b>	HY-N0646	
<b>CAS No.:</b>	29782-68-1	
<b>Molecular Formula:</b>	C <sub>25</sub> H <sub>22</sub> O <sub>10</sub>	
<b>Molecular Weight:</b>	482.44	
<b>Target:</b>	Phosphatase; Endogenous Metabolite	
<b>Pathway:</b>	Metabolic Enzyme/Protease	
<b>Storage:</b>	Powder	-20°C 3 years 4°C 2 years
	In solvent	-80°C 6 months -20°C 1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 125 mg/mL (259.10 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.0728 mL	10.3640 mL	20.7280 mL
	5 mM	0.4146 mL	2.0728 mL	4.1456 mL
	10 mM	0.2073 mL	1.0364 mL	2.0728 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (4.31 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (4.31 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (4.31 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Silydianin is an active constituent of *Silybium marianum*, with exhibit anti-collagenase, antitumor and anti-elastase activities. Silydianin is a natural protein tyrosine phosphatase 1B (PTP1B) with an IC<sub>50</sub> of 17.38 μM. Silydianin has inhibitory effect on the in vitro production and release of oxidative products<sup>[1][2][3]</sup>.

### REFERENCES

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[1]. Vostálová J, et al. Skin Protective Activity of Silymarin and its Flavonolignans. *Molecules*. 2019 Mar 14;24(6).

[2]. Qin N, et al. Identification of flavonolignans from *Silybum marianum* seeds as allosteric protein tyrosine phosphatase 1B inhibitors. *J Enzyme Inhib Med Chem*. 2018 Dec;33(1):1283-1291.

[3]. Zielińska-Przyjemska M, et al. An in vitro study of the protective effect of the flavonoid silydianin against reactive oxygen species. *Phytother Res*. 2006 Feb;20(2):115-9.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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