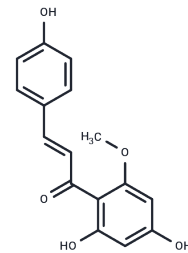


## Helichrysetin

## Chemical Properties

CAS No. :	62014-87-3
Formula:	C <sub>16</sub> H <sub>14</sub> O <sub>5</sub>
Molecular Weight:	286.28
Storage:	Keep away from direct sunlight, Store at low temperature, Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Helichrysetin has mild anti-HIV-1 PR activity. Helichrysetin has great potentials for development as an anticancer agent, it has cytotoxic effect on four selected cancer cell lines, A549, MCF-7, Ca Ski, and HT-29.
Targets(IC50)	Apoptosis, HIV Protease
In vitro	Searching for anti-HIV-1 protease (PR) inhibitors of Thai medicinal plants led to the isolation of a new cyclohexenyl chalcone named panduratin C (1) and chalcone derivatives (2-6) from the methanol extract of Boesenbergia pandurata rhizomes. The known compounds were identified to be panduratin A (2), hydroxypanduratin A (3), Helichrysetin (4), 2',4',6'-trihydroxyhydrochalcone (5), and uvangoletin (6). The structures of all compounds were elucidated on the basis of chemical and spectroscopic methods. It was found that 3 possessed the most potent anti-HIV-1 PR activity with an IC50 value of 5.6 microM, followed by 2 (IC50 = 18.7 microM), whereas other compounds exhibited only mild activity.

## Solubility Information

Solubility	DMSO: 150 mg/mL (523.96 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 (6.99 mM), Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.4931 mL	17.4654 mL	34.9308 mL
5 mM	0.6986 mL	3.4931 mL	6.9862 mL
10 mM	0.3493 mL	1.7465 mL	3.4931 mL
50 mM	0.0699 mL	0.3493 mL	0.6986 mL

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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

Anti-HIV-1 protease activity of compounds from *Boesenbergia pandurata*. *Bioorg Med Chem.* 2006 Mar 15;14(6): 1710-4.

Liu X, Gu C, Lv J, et al. Progesterone attenuates Th17-cell pathogenicity in autoimmune uveitis via Id2/Pim1 axis. *Journal of Neuroinflammation.* 2023, 20(1): 1-19.

Zhang C, Liu X, Gu C, et al. Histone deacetylases facilitate Th17-cell differentiation and pathogenicity in autoimmune uveitis via CDK6/ID2 axis. *Journal of Advanced Research.* 2024

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