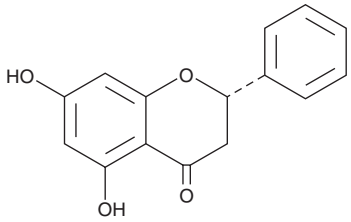
PRODUCT INFORMATION

Pinocembrin

Item No. 29852

CAS Registry No.: 480-39-7
Formal Name: (2S)-2,3-dihydro-5,7-dihydroxy-2-phenyl-4H-1-benzopyran-4-one
Synonyms: (+)-Pinocembrin, Dihydrochrysin, NSC 279005
MF: $C_{15}H_{12}O_4$
FW: 256.3
Purity: ≥95%
UV/Vis.: λ_{max}: 212, 290 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Alpinia katsumadai* Hayata



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pinocembrin is supplied as a solid. A stock solution may be made by dissolving the pinocembrin in the solvent of choice, which should be purged with an inert gas. Pinocembrin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of pinocembrin in these solvents is approximately 1 mg/ml in ethanol and approximately 30 mg/ml in DMSO and DMF.

Pinocembrin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pinocembrin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. pinocembrin has a solubility of approximately 0.5 mg/ml in a 1:8 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Pinocembrin is a flavonoid that has been found in *Eucalyptus*, and has diverse biological activities.[1-5] It induces apoptosis in, and inhibits the migration of, SKOV3 ovarian cancer cells when used at a concentration of 200 µM.[2] Pinocembrin (5 mg/kg) reduces lesion volume, as well as brain microglial activation and production of IL-1β, IL-6, and TNF-α in a mouse model of collagenase-induced intracerebral hemorrhage (ICH).[3] It prevents increases in plasma and kidney malondialdehyde (MDA) levels, glomeruli lobulation, mesangial expansion, and tubule vacuolization and occlusion, and it decreases hepatic cholesterol, triglyceride, and LDL levels in a rat model of diabetic nephropathy.[4] Pinocembrin (20 and 50 mg/kg) reduces pulmonary edema, as well as neutrophil, lymphocyte, and macrophage infiltration in a mouse model of LPS-induced lung injury.[5]

References

1. Rasul, A., Millimouno, F.M., Eltayb, W.A., *et al.* Pinocembrin: A novel natural compound with versatile pharmacological and biological activities. *Biomed. Res. Int.* 379850 (2013).
2. Gao, J., Lin, S., Gao, Y., *et al.* Pinocembrin inhibits the proliferation and migration and promotes the apoptosis of ovarian cancer cells through down-regulating the mRNA levels of N-cadherin and GABAB receptor. *Biomed. Pharmacother.* **120**, 109505 (2019).
3. Lan, X., Han, X., Li, Q., *et al.* Pinocembrin protects hemorrhagic brain primarily by inhibiting toll-like receptor 4 and reducing M1 phenotype microglia. *Brain Behav. Immun.* **61**, 326-339 (2017).
4. Granados-Pineda, J., Uribe-Uribe, N., Garía-López, P., *et al.* Effect of pinocembrin isolated from Mexican brown propolis on diabetic nephropathy. *Molecules* **23(4)**, 1-19 (2018).
5. Soromou, L.-W., Chu, X., Jiang, L., *et al.* In vitro and in vivo protection provided by pinocembrin against lipopolysaccharide-induced inflammatory responses. *Int. Immunol.* **14(1),** 66-74 (2012).

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