

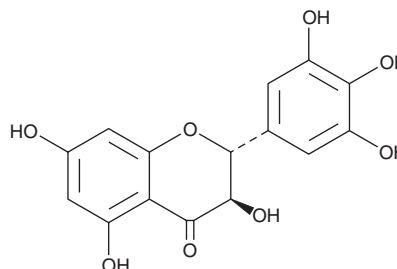
PRODUCT INFORMATION



Dihydromyricetin

Item No. 23549

CAS Registry No.: 27200-12-0
Formal Name: (2R,3R)-2,3-dihydro-3,5,7-trihydroxy-2-(3,4,5-trihydroxyphenyl)-4H-1-benzopyran-4-one
Synonym: (+)-Dihydromyricetin
MF: C₁₅H₁₂O₈
FW: 320.3
Purity: ≥98%
UV/Vis.: λ_{max}: 208, 291 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Dihydromyricetin is supplied as a crystalline solid. A stock solution may be made by dissolving the dihydromyricetin in the solvent of choice, which should be purged with an inert gas. Dihydromyricetin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of dihydromyricetin in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Dihydromyricetin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, dihydromyricetin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Dihydromyricetin has a solubility of approximately 0.5 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Dihydromyricetin is a natural flavanone isolated from *A. grossedentata*, *H. dulcis*, and other plants that has antioxidant, antiproliferative, anti-apoptotic, and anti-alcohol intoxication properties.¹⁻⁷ Dihydromyricetin scavenges 1,1-diphenyl-2-picrylhydrazyl (DPPH) radicals (IC₅₀ = 0.235 µg/ml) and decreases reactive oxygen species (ROS) generated by AAPH (Item No. 82235) in human erythrocytes when used at a concentration of 6 µg/ml.³ It dose-dependently decreases proliferation and increases apoptosis in human liver carcinoma HepG2 cells, but does not affect proliferation of normal hepatic HL7702 cells.⁴ *In vivo*, it decreases tumor volume by 43.5% in a HepG2 mouse xenograft model when administered at a dose of 500 mg/kg per day.⁵ Dihydromyricetin binds to GABA_A receptors in rat cortical membrane preparations (IC₅₀ = 4.36 µM) and dose-dependently reduces loss of righting reflex (LORR) in ethanol-intoxicated rats.⁶ It also improves cognitive deficits in a mouse model of Alzheimer's disease when administered at 2 mg/kg for three months.⁷

References

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4. Liu, B., Tan, X., Liang, J., et al. *Sci. Rep.* **4**, 7041 (2014).
5. Zhang, Q., Liu, J., Liu, B., et al. *Sci. Rep.* **4**, 4628 (2014).
6. Shen, Y., Lindemeyer, A.K., Gonzalez, C., et al. *J. Neurosci.* **32**(1), 390-401 (2012).
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WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM