

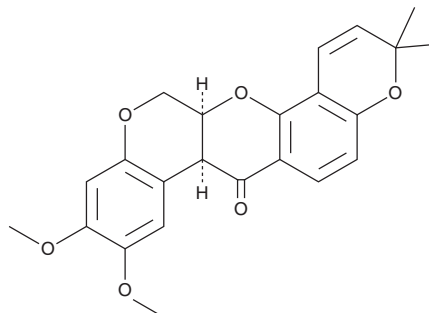
PRODUCT INFORMATION



(-)-Deguelin

Item No. 10010706

CAS Registry No.: 522-17-8
Formal Name: 13,13aS-dihydro-9,10-dimethoxy-3,3-dimethyl-3H-[1]benzopyrano[3,4-b]pyrano[2,3-h][1]benzopyran-7(7aS)-one
Synonym: (-)-cis-Deguelin
MF: C₂₃H₂₂O₆
FW: 394.4
Purity: ≥98%
UV/Vis.: λ_{max}: 238, 252, 270, 297 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

(-)-Deguelin is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-deguelin in an organic solvent purged with an inert gas. (-)-Deguelin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of (-)-deguelin in these solvents is approximately 25 mg/ml.

(-)-Deguelin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (-)-deguelin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. (-)-Deguelin has a solubility of approximately 0.33 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Rotenoids, deriving from the flavonoid family of compounds, act as chemopreventive agents that inhibit NADH:ubiquinone oxidoreductase activity and suppress phorbol ester-induced ornithine decarboxylase (ODC) activity.¹ The rotenoid compound deguelin, originally isolated from the bark of *M. sericea* (*Leguminosae*) to be used as an insecticide and fish poison, has chemopreventive and chemosensitizing effects in models of skin, mammary, colon, and lung carcinogenesis.²⁻⁴ Deguelin inhibits cell growth (IC₅₀ = <10⁻⁸ M), blocks PI3K/Akt activation, suppresses COX-2 expression, and induces apoptosis in premalignant and squamous human bronchial epithelial (HBE) cells without affecting normal HBE cells.^{2,5} At 6 mg/kg, deguelin induces Parkinson's disease-like symptoms in rats after six days of subcutaneous infusion and therefore may also serve as a useful model for Parkinson's disease research.⁶

References

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3. Lee, H.-Y., Oh, S.-H., Woo, J.K., et al. *Journal of the National Cancer Institute* **97**(22), 1695-1699 (2005).
4. Peng, X.-H., Karna, P., O'Regan, R.M., et al. *Mol. Pharmacol.* **71**, 101-111 (2007).
5. Lee, H.-Y., Suh, Y.-A., Kosmeder, J.W., et al. *Clinical Cancer Research* **10**, 1074-1079 (2004).
6. Caboni, P., Sherer, T.B., Zhang, N., et al. *Chem. Res Toxicol.* **17**, 1540-1548 (2004).

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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