

PRODUCT INFORMATION



Tephrosin (synthetic)

Item No. 19840

CAS Registry No.: 76-80-2
Formal Name: (7aR,13aR)-13,13a-dihydro-7a-hydroxy-9,10-dimethoxy-3,3-dimethyl-3H-bis[1]benzopyrano[3,4-b:6',5'-e]pyran-7(7aH)-one

Synonyms: Deguelinol I, Hydroxydeguelin

MF: C₂₃H₂₂O₇

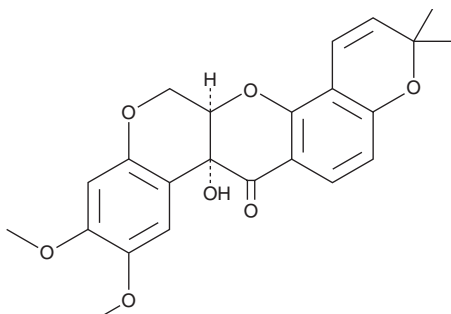
FW: 410.4

Purity: ≥98%

Supplied as: A 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

Tephrosin (synthetic) is supplied as a solid. A stock solution may be made by dissolving the tephrosin (synthetic) in the solvent of choice. Tephrosin (synthetic) is soluble in the organic solvent chloroform, which should be purged with an inert gas.

Description

Tephrosin is a rotenoid first isolated from the leaves and seeds of *T. purpurea* and *T. vogelii* that exhibits antineoplastic and piscicidal activities. The toxic actions of this compound are attributed to its ability to inhibit the NADH:ubiquinone oxidoreductase with an IC₅₀ value of 98 nM.¹ Tephrosin is also reported to induce ornithine decarboxylase activity with an IC₅₀ value of 147 nM.¹ Tephrosin has been shown to enhance the cytotoxic activity of 2-deoxy-D-glucose (Item No. 14325) against various cancer human cancer cell lines, depleting intracellular ATP and inducing apoptosis.²

References

1. Fang, N. and Casida, J.E. Anticancer action of cubé insecticide: Correlation for rotenoid constituents between inhibition of NADH:ubiquinone oxidoreductase and induced ornithine decarboxylase activities. *Proc. Natl. Acad. Sci. USA* **95**, 3380-3384 (1998).
2. Choi, Y. and Lee, J. H. The combination of tephrosin with 2-deoxy-D-glucose enhances the cytotoxicity via accelerating ATP depletion and blunting autophagy in human cancer cells. *Cancer Biol. Ther.* **12(11)**, 989-996 (2011).

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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