PRODUCT INFORMATION



Nepodin

Item No. 27611

CAS Registry No.: Formal Name:	3785-24-8 1-(1,8-dihydroxy-3-methyl-2- naphthalenyl)-ethanone
Synonyms:	Musizin, NSC 365795 OH OH
MF:	$C_{13}H_{12}O_3$
FW:	216.2
Purity:	≥98%
UV/Vis.:	λ _{max} : 224, 260 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/Maesopsis eminii/Dianella laevis/Dianella nigra/Rumex spp
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.	

Laboratory Procedures

Nepodin is supplied as a solid. A stock solution may be made by dissolving the nepodin in the solvent of choice, which should be purged with an inert gas. Nepodin is soluble in the organic solvent methanol.

Description

Nepodin is a naphthol that has been found in *Rumex* and has diverse biological activities.¹⁻⁴ It inhibits COX-1 and COX-2 in vitro (IC₅₀s = 27.43 and 32.28 µM, respectively).¹ Nepodin inhibits C. albicans and S. aureus biofilm formation in a concentration-dependent manner when used at concentrations ranging from 1 to 10 µM.² It is active against chloroquine-sensitive and -resistant P. falciparum strains $(IC_{50}s = 0.74 \text{ and } 0.79 \mu g/ml \text{ for strains 3D7 and S20, respectively}).^3$ Nepodin (250 mg/kg) suppresses parasitemia and increases survival time in a mouse model of P. berghei infection. It also increases skeletal muscle phosphorylation of AMPK, reduces serum and hepatic triglyceride and cholesterol levels, and improves insulin resistance in *db/db* diabetic mice.⁴

References

- 1. Grover, J., Kumar, V., Singh, V., et al. Synthesis, biological evaluation, molecular docking and theoretical evaluation of ADMET properties of nepodin and chrysophanol derivatives as potential cyclooxygenase (COX-1, COX-2) inhibitors. Eur. J. Med. Chem. 80, 47-56 (2014).
- 2. Lee, J.H., Kim, Y.G., Khadke, S.K., et al. Inhibition of biofilm formation by Candida albicans and polymicrobial microorganisms by nepodin via hyphal-growth suppression. ACS Infect. Dis. 5(7), 1177-1187 (2019).
- 3. Lee, K.H. and Rhee, K.H. Antimalarial activity of nepodin isolated from Rumex crispus. Arch. Pharm. Res. 36(4), 430-435 (2013).
- 4. Ha, B.G., Yonezawa, T., Son, M.J., et al. Antidiabetic effect of nepodin, a component of Rumex roots, and its modes of action in vitro and in vivo. Biofactors 40(4), 436-447 (2014).

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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