

PRODUCT INFORMATION



Gracillin

Item No. 11848

CAS Registry No.: 19083-00-2

Formal Name: (3 β ,25R)-spirost-5-en-3-yl O-6-deoxy- α -L-mannopyranosyl-(1 \rightarrow 2)-O-[β -D-glucopyranosyl-(1 \rightarrow 3)]- β -D-glucopyranoside
NSC 698787

Synonym:

MF: C₄₅H₇₂O₁₇

FW: 885.1

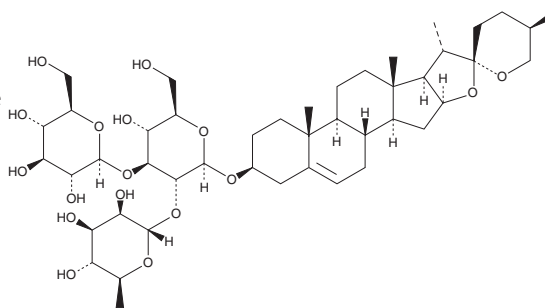
Purity: $\geq 95\%$

UV/Vis.: λ_{max} : 311 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

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

Description

Gracillin is a steroidal saponin that has been found in *C. speciosus* and has diverse biological activities.¹⁻³ It reduces cell growth in a panel of 58 leukemia, non-small cell lung, colon, CNS, prostate, melanoma, ovarian, renal, and breast cancer cell lines (GI_{50} s = 0.58-2.44 μ M).¹ Gracillin reduces growth of fish Ich parasite (*I. multifiliis*) theronts (EC_{50} = 0.53 mg/L) and induces 100 and 92.5% mortality of *I. multifiliis* protomonts and encysted tomonts, respectively, when used at a concentration of 0.8 mg/L.² It decreases the number of *I. multifiliis*-infected goldfish by approximately 75% when used at a concentration of 1 mg/L in tank water. Gracillin (100 mg/kg) reduces ear edema induced by arachidonic acid (Item No. 90010) in mice.³

References

1. Hu, K. and Yao, X. The cytotoxicity of methyl protoneogracillin (NSC-698793) and gracillin (NSC-698787), two steroidal saponins from the rhizomes of *Dioscorea collettii* var. *hypoglauca*, against human cancer cells *in vitro*. *Phytother. Res.* **17**(6), 620-626 (2003).
2. Zheng, W., Yan, C.-M., Zhang, Y.-B., *et al.* Antiparasitic efficacy of Gracillin and Zingibersis newsaponin from *Costus speciosus* (Koen ex. Retz) Sm. against *Ichthyophthirius multifiliis*. *Parasitology* **142**(3), 473-479 (2015).
3. Kim, S.Y., Son, K.H., Chang, H.W., *et al.* Inhibition of mouse ear edema by steroidal and triterpenoid saponins. *Arch. Pharm. Res.* **22**(3), 313-316 (1999).

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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