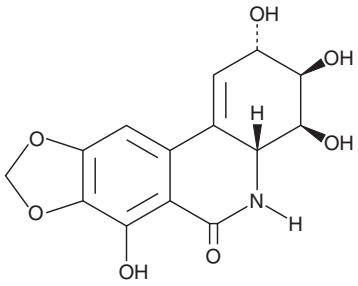
PRODUCT INFORMATION

Narciclasine

Item No. 20361

CAS Registry No.:	29477-83-6
Formal Name:	(2S,3R,4S,4aR)-3,4,4a,5-tetrahydro-2,3,4,7-tetrahydroxy-[1,3]dioxolo[4,5-j]phenanthridin-6(2H)-one
Synonyms:	(+)-Lycoricidinol, (+)-Narciclasine, NSC 266535
MF:	$C_{14}H_{13}NO_7$
FW:	307.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 213, 252, 302 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Narcissus* sp.



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

Laboratory Procedures

Narciclasine is supplied as a crystalline solid. A stock solution may be made by dissolving the narciclasine in the solvent of choice, which should be purged with an inert gas. Narciclasine is soluble in the organic solvent DMSO at a concentration of approximately 100 mM.

Description

Narciclasine is an isocarbostyril alkaloid that has been found in *Narcissus* and has diverse biological activities.[1-5] It selectively induces apoptosis in PC3 prostate and MCF-7 and MDA-MB-231 breast cancer cells over CCD-25Lu fibroblasts at 1 µM.[1] Narciclasine has antiproliferative activity against a panel of six glioblastoma cancer cell lines (mean IC_{50} = ~50 nM), induces actin stress fiber formation in U373 MG glioblastoma cells, and increases survival in an orthotopic Hs 683 glioblastoma mouse xenograft model.[2] It also inhibits neurite outgrowth in SH-SY5Y cells with a 10% effective concentration (EC_{10}) value of 4.44 nM and suppresses the proliferation of isolated human T cells (IC_{50} = 14 nM).[3,4] Intradermal administration of narciclasine (2 mg/kg) decreases disease severity and prevents increases in spleen weight in a mouse model of psoriasis induced by imiquimod (Item No. 14956).[5]

Reference

1. Dumont, P., Ingrassia, L., Rouzeau, S., *et al.* The Amaryllidaceae isocarbostyril narciclasine induces apoptosis by activation of the death receptor and/or mitochondrial pathways in cancer cells but not in normal fibroblasts. *Neoplasia* **9(9)**, 766-776 (2007).
2. Lefranc, F., Sauvage, S., Van Goietsenoven, G., *et al.* Narciclasine, a plant growth modulator, activates Rho and stress fibers in glioblastoma cells. *Mol. Cancer Ther.* **8(7)**, 1739-1750 (2009).
3. Braun, G., Herberth, G., Krauss, M., *et al.* Neurotoxic mixture effects of chemicals extracted from blood of pregnant women. *Science* **386(6719)**, 301-309 (2024).
4. Wang, W.-L., Wu, X.-Y., Luo, X.-Y., *et al.* Immunosuppressive alkaloids from *Narcissus tazetta* subsp. *Chinensis* and the mechanism of (+)-narciclasine *in vitro* and *in vivo*. *Phytochemistry* **225:114198**, (2024).
5. Kong, Y., Jiang, J., Huang, Y., *et al.* Narciclasine inhibits phospholipase A2 and regulates phospholipid metabolism to ameliorate psoriasis-like dermatitis. *Front. Immunol.* **13:1094375**, (2023).

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