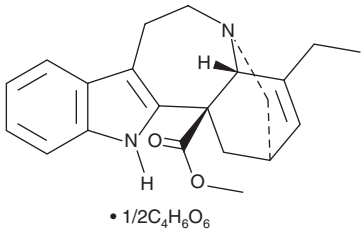
PRODUCT INFORMATION

Catharanthine (tartrate)

Item No. 11695

CAS Registry No.:	4168-17-6
Formal Name:	(2α,5β,6α)-3,4-didehydro-ibogamine-18β-carboxylic acid, methyl ester, 2R,3R-dihydroxybutanedioate (2:1)
Synonym:	(+)-3,4-Didehydrocoronaridine
MF:	$C_{21}H_{24}N_2O_2 \bullet 1/2C_4H_6O_6$
FW:	486.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 224, 283 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

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

Catharanthine (tartrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, catharanthine (tartrate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Catharanthine (tartrate) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Catharanthine is an indole alkaloid that has been found in *C. roseus* and has diverse biological activities.[1-5] It is a precursor in the biosynthesis of the antimitotic agents vinblastine (Item No. 11762) and vincristine (Item No. 11764).[1] Catharanthine (320 µM) inhibits microtubule assembly and the proliferation of HCT116 colon cancer cells (IC_{50} = 60 µg/ml).[2,3] It induces the release of amylase from mouse pancreas preparations when used at a concentration of 100 µM.[4] Catharanthine (0.5-20 mg/kg) decreases blood pressure and heart rate in anesthetized normotensive rats.[5]

References

1. Gupta, M.M., Singh, D.V., Tripathi, A.K., *et al.* Simultaneous determination of vincristine, vinblastine, catharanthine, and vindoline in leaves of *Catharanthus roseus* by high-performance liquid chromatography. *J. Chromatogr. Sci.* **43(9)**, 450-453 (2005).
2. Prakash, V. and Timasheff, S.N. Mechanism of interaction of vinca alkaloids with tubulin: Catharanthine and vindoline. *Biochemistry* **30(3)**, 873-880 (1991).
3. Siddiqui, M.J., Ismail, Z., Aisha, A.F.A., *et al.* Cytotoxic activity of *Catharanthus roseus* (apocynaceae) crude extracts and pure compounds against human colorectal carcinoma cell line. *Int. J. Pharmacol.* **6(1)**, 43-47 (2010).
4. Williams, J.A. Catharanthine: A novel stimulator of pancreatic enzyme release. *Cell Tissue Res.* **192(2)**, 277-284 (1978).
5. Jadhav, A., Liang, W., Papageorgiou, P.C., *et al.* Catharanthine dilates small mesenteric arteries and decreases heart rate and cardiac contractility by inhibition of voltage-operated calcium channels on vascular smooth muscle cells and cardiomyocytes. *J. Pharmacol. Exp. Ther.* **345(3)**, 383-392 (2013).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM