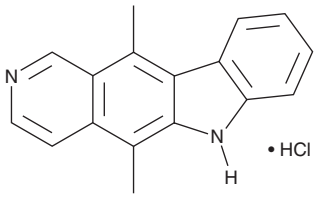
PRODUCT INFORMATION

Ellipticine (hydrochloride)

Item No. 18742

CAS Registry No.:	5081-48-1
Formal Name:	5,11-dimethyl-6H-pyrido[4,3-b] carbazole, monohydrochloride
MF:	$C_{17}H_{14}N_2 \bullet HCl$
FW:	282.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 240, 249, 307 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

Ellipticine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ellipticine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Ellipticine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ellipticine (hydrochloride) in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Ellipticine (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ellipticine (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Ellipticine (hydrochloride) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ellipticine is an alkaloid isolated from *Apocyanaceae* plants that exhibits antitumor activities by intercalating into DNA and/or inhibiting DNA topoisomerase II.[1-3] It forms covalent adducts in DNA after being enzymatically activated with cytochrome P450 isoforms (*e.g.*, CYP3A4, CYP1A1, or CYP1A2) or by peroxidases in target tissues.[2,3] Ellipticine has been shown to inhibit the proliferation of human breast adenocarcinoma MCF-7 cells, leukemia HL-60 and CCRF-CEM cells, neuroblastoma IMR-32, UKF-NB-3, and UKF-NB-4 cells, and U87MG glioblastoma cells with IC_{50} values ranging from 0.27-4.7 µM.[2]

References

1. Kohn, K.W., Waring, M.J., Glaubiger, D., *et al*. Intercalative binding of ellipticine to DNA. *Cancer Res.* **35(1)**, 71-76 (1975).
2. Stiborovį, M., Poljakova, J., Martinkova, E., *et al*. Ellipticine cytotoxicity to cancer cell lines - a comparative study. *Interdiscip. Toxicol.* **4(2)**, 98-105 (2011).
3. Aimovį, D., Svobodovį, L., Kotrbovį, V., *et al*. The anticancer drug ellipticine is a potent inducer of rat cytochromes P450 1A1 and 1A2, thereby modulating its own metabolism. *Drug Metab. Dispos.* **35(10)**, 1926-1934 (2007).

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