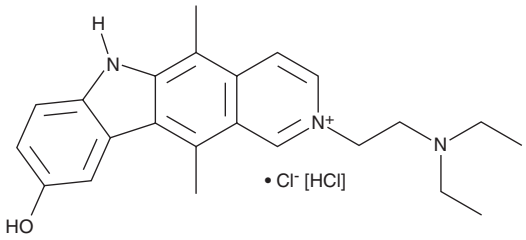
PRODUCT INFORMATION

Datelliptium (chloride hydrochloride)

Item No. 42966

CAS Registry No.: 157000-76-5
Formal Name: 2-[2-(diethylamino)ethyl]-9-hydroxy-5,11-dimethyl-6H-pyrido[4,3-b]carbazolium, monochloride, monohydrochloride
MF: $C_{23}H_{28}N_3O \bullet Cl$ [HCl]
FW: 434.4
Purity: ≥98%
Supplied as: A 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

Datelliptium (chloride hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the datelliptium (chloride hydrochloride) in the solvent of choice, which should be purged with an inert gas. Datelliptium (chloride hydrochloride) is soluble (≥10 mg/ml) in ethanol and sparingly soluble (1-10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of datelliptium (chloride hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. Datelliptium (chloride hydrochloride) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Datelliptium is an anticancer agent and a derivative of ellipticine (Item No. 18742).[1] It intercalates into DNA and inhibits topoisomerase II in a concentration-dependent manner. Datelliptium also inhibits mitochondrial complex IV, also known as cytochrome *c* oxidase (IC_{50} = 70 µM for the potato enzyme).[2] It inhibits the growth of L1210 leukemia cells (IC_{50} = 0.076 µM) but is also cytotoxic to primary human hepatocytes (IC_{50} = 4 µM).[1,3] Datelliptium reduces glycogen synthesis, albumin synthesis, total protein synthesis, gluconeogenesis, triglyceride secretion, and ureogenesis in isolated rat hepatocytes (IC_{50}s = 14.3, 15.4, 3, 28.8, 2.3, and 96.4 µM, respectively).[3] It increases survival in several murine models of cancer.[1]

References

1. Auclair, C., Pierre, A., Voisin, E., *et al.* Physicochemical and pharmacological properties of the antitumor ellipticine derivative 2-(diethylamino-2-ethyl)9-hydroxy ellipticinium-chloride, HCl. *Cancer Res.* **47(23),** 6254-6561 (1987).
2. Dupont, J., Dodin, G., and Schwaller, M.-A. Interactions between ellipticine derivatives and the mitochondrial respiratory chain. *Plant Sci.* **54(2),** 109-115 (1988).
3. Donato, M.T., Goethals, F., Gómez-Lechón, M.J., *et al.* Toxicity of the antitumoral drug datelliptium in hepatic cells: Use of models *in vitro* for the prediction of toxicity *in vivo*. *Toxicol. in Vitro* **6(4),** 295-302 (1992).

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