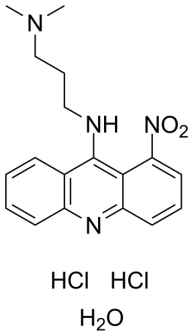
Nitracrine dihydrochloride hydrate

Cat. No.:	HY-U00279A
CAS No.:	55429-45-3
Molecular Formula:	$C_{18}H_{24}Cl_2N_4O_3$
Molecular Weight:	415.31
Target:	DNA/RNA Synthesis
Pathway:	Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Nitracrine (dihydrochloride hydrate) inhibits RNA synthesis and covalently, reversibly binds to DNA but also forms covalent adducts with DNA in vivo. Nitracrine (dihydrochloride hydrate), a 1-nitroacridine derivative, is a potent hypoxia-selective agent in vitro and antitumor agent. Nitracrine (dihydrochloride hydrate) has cytotoxicity towards most cells[1][2][3].

In Vitro

Nitracrine (2 μM; 1 hour) causes death of 50% of human erythroleukemia K562 cells under illumination for 48 min. While it is 8.5 hours for Nitracrine on the dark[3].

Nitracrine has LD50s of 0.23 μM, 0.6 μM, 0.16 μM in P388 cell, NIH3T3 cell, and K562 cells under illumination after 1 hour of cells incubation, respectively[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[3]

Cell Line:	Human erythroleukemia K562 cells
Concentration:	2 μM
Incubation Time:	1h
Result:	Death of 50% of human erythroleukemia K562 cells were achieved under illumination for 48 min.

REFERENCES

[1]. Wilson WR, et al. Selective toxicity of nitracrine to hypoxic mammalian cells. Br J Cancer. 1984 Feb;49(2):215-23.

[2]. Gniazdowski M, et al. Nitracrine and its congeners--an overview. Gen Pharmacol. 1995 May;26(3):473-81.Gniazdowski M, et al. NitracrineGniazdowski M, et al. Nitracrine and its congeners--an overview. Gen Pharmacol. 1995 May;26(3):473-81. and its congeners--an overview. Gen Pharmacol. 1995 May;26(3):473-81.

[3]. Daghastanli NA, et al. Cytotoxicity of nitroheterocyclic compounds, quinifuryl and nitracrine, towards leukaemic and normal cells on the dark and under illumination with visible light. J Photochem Photobiol B. 2004 Jul 19;75(1-2):27-32.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA