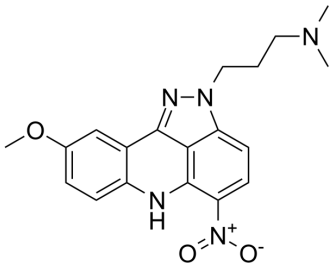
Pyrazoloacridine

Cat. No.:	HY-108969
CAS No.:	99009-20-8
Molecular Formula:	$C_{19}H_{21}N_5O_3$
Molecular Weight:	367.4
Target:	Topoisomerase; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : < 1 mg/mL (ultrasonic) (insoluble or slightly soluble)

BIOLOGICAL ACTIVITY

Description	Pyrazoloacridine (NSC 366140), an intercalating agent with anti-cancer activity, inhibits the activity of topoisomerases 1 and 2. Pyrazoloacridine (NSC 366140) exhibits an IC_{50} of 1.25 μM in K562 myeloid leukemia cells for 24 h treatment[1][2].
In Vitro	Pyrazoloacridine (NSC 366140, PD 115934) exhibits IC_{50} values of 10.7 μM and 4.5 μM for oxic and hypoxic HCT-8 cells[1]. Pyrazoloacridine (NSC 366140, 2-4 μM) abolishes the catalytic activity of both topo I and topo II in vitro[2]. Pyrazoloacridine (NSC 366140) displays activity against cisplatin- and paclitaxel-resistant ovarian cancer[2]. Pyrazoloacridine (NSC 366140) has been shown to cause delayed DNA fragmentation in MCF-7 breast cancer cells[2]. Pyrazoloacridine (NSC 366140) induces apoptosis in P53-deficient Hep 3B human hepatoma cells[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[2]

Cell Line:	K562 Myeloid Leukemia Cells.
Concentration:	0-500 μM.
Incubation Time:	1 h or 24 h.
Result:	When K562 cells were incubated with PA for 1 h and then plated in soft agar, an IC_{50} of ~50 μM was observed. In contrast, when cells were incubated for 24 h with PA, the IC_{50} was 1.25 μM.

REFERENCES

[1]. J S Sebolt, et al. Pyrazoloacridines, a new class of anticancer agents with selectivity against solid tumors in vitro. Cancer Res. 1987 Aug 15;47(16):4299-304.

[2]. A A Adjei, et al. Effect of pyrazoloacridine (NSC 366140) on DNA topoisomerases I and II. Clin Cancer Res. 1998 Mar;4(3):683-91.

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