# Pyrazoloacridine

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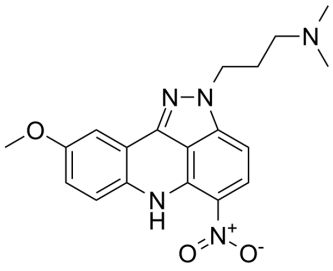
| **Cat. No.:** | HY-108969 |
| **CAS No.:** | 99009-20-8 |
| **Molecular Formula:** | $C_{19}H_{21}N_5O_3$ |
| **Molecular Weight:** | 367.4 |
| **Target:** | Topoisomerase; Apoptosis |
| **Pathway:** | Cell Cycle/DNA Damage; Apoptosis |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent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



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 16.67 mg/mL (45.37 mM; ultrasonic and warming and heat to 60°C)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.7218 mL | 13.6091 mL | 27.2183 mL |
| | 5 mM | 0.5444 mL | 2.7218 mL | 5.4437 mL |
| | 10 mM | 0.2722 mL | 1.3609 mL | 2.7218 mL |

Please refer to the solubility information to select the appropriate solvent.

## 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]

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| Cell Line: | K562 Myeloid Leukemia Cells. |
| Concentration: | 0-500 μM. |

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| 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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