# MTR-106

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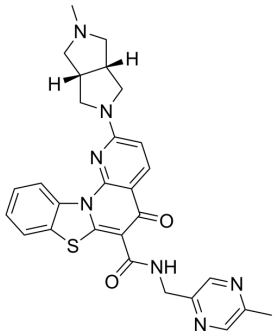
|---|---|
| **Cat. No.:** | HY-148953 |
| **CAS No.:** | 1639357-93-9 |
| **Molecular Formula:** | $C_{28}H_{27}N_7O_2S$ |
| **Molecular Weight:** | 525.62 |
| **Target:** | DNA/RNA Synthesis; G-quadruplex; Apoptosis |
| **Pathway:** | Cell Cycle/DNA Damage; Apoptosis |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 6 months<br>-20°C 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 2 mg/mL (3.81 mM; ultrasonic and warming and heat to 60°C)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 1.9025 mL | 9.5126 mL | 19.0252 mL |
| | 5 mM | --- | --- | --- |
| | 10 mM | --- | --- | --- |

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

## BIOLOGICAL ACTIVITY

**Description**

MTR-106 is a potent and orally active G-quadruplex stabilizer and RNA polymerase I inhibitor. MTR-106 induces apoptosis and inhibits cell growth. MTR-106 can be used in research of cancer[1].

**In Vitro**

MTR-106 (0-100 μM; 7 d) has antitumor activity in both HR-deficient cells and PARPi-resistant cells[1].
MTR-106 (0-100 μM; 7 d) induces apoptosis, cell cycle arrest and DNA damage[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

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|---|---|
| Cell Line: | HR-deficient and PARPi-resistant cancer cells |
| Concentration: | 0-100 μM |
| Incubation Time: | 7 days |
| Result: | Inhibited the viability of HR-deficient cells and PARPi-resistant cells in a dose-dependent nanner. |

Cell Cycle Analysis[1]

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|---|---|
| Cell Line: | Capan-1 cells |
| Concentration: | 0.1, 0.3, and 1 μM |
| Incubation Time: | 24 hours |
| Result: | Increased in cells in G2/M, accompanied by a reduction in cell numbers in G1. |

Western Blot Analysis[1]

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|---|---|
| Cell Line: | Capan-1 cells |
| Concentration: | 1, 5, and 10 μM |
| Incubation Time: | 24 hours |
| Result: | Increased the cleaved caspases 3, 7, and 9 and cleaved PARP in a dose-dependent manner. |

**In Vivo**

MTR-106 (10-30 mg/kg; p.o.; twice a week, for 29 days) suppresses the tumor growth of BRCA-deficient and PARPi-resistant xenografts in nude mice[1].

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

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|---|---|
| Animal Model: | BRCA-deficient and PARPi-resistant xenografts in nude mice[1] |
| Dosage: | 10, 20, and 30 mg/kg |
| Administration: | oral administration; twice a week, for 29 days |
| Result: | Inhibited tumor growth in a dose-dependent manner. |

## REFERENCES

[1]. Li MZ, et, al. Discovery of MTR-106 as a highly potent G-quadruplex stabilizer for treating BRCA-deficient cancers. Invest New Drugs. 2021 Oct;39(5):1213-1221.



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