# Cevipabulin fumarate

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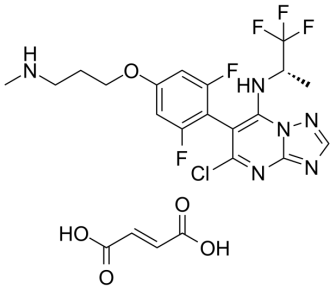
| **Cat. No.:** | HY-14949C |
| **CAS No.:** | 849550-67-0 |
| **Molecular Formula:** | $C_{22}H_{22}ClF_5N_6O_5$ |
| **Molecular Weight:** | 580.89 |
| **Target:** | Microtubule/Tubulin |
| **Pathway:** | Cell Cycle/DNA Damage; Cytoskeleton |
| **Storage:** | 4°C, sealed storage, away from moisture<br>* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture) |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 50 mg/mL (86.07 mM; Need ultrasonic)

$H_2O$ : 1.43 mg/mL (2.46 mM; ultrasonic and warming and heat to 60°C)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
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| **1 mM** | 1.7215 mL | 8.6075 mL | 17.2150 mL |
| **5 mM** | 0.3443 mL | 1.7215 mL | 3.4430 mL |
| **10 mM** | 0.1721 mL | 0.8607 mL | 1.7215 mL |

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

## BIOLOGICAL ACTIVITY

**Description**

Cevipabulin fumarate (TTI-237 fumarate) is an oral, microtubule-active, antitumor compound and inhibits the binding of [$^3$H]NSC 49842 to tubulin, with an $IC_{50}$ of 18-40 nM for cytotoxicity in human tumor cell line[1][2].

**$IC_{50}$ & Target**

IC50: 18-40 nM (microtubule in human tumor cells)[1].

**In Vitro**

Cevipabulin (0-50 nM, 72 hours) shows good activity (between 18 and 40 nM $IC_{50}$ values) on cell lines from ovarian, breast, prostate, and cervical tumors[1].

Flow cytometry experiments reveal that, Cevipabulin (TTI-237) at low concentrations (20-40 nM) produces sub-$G_1$ nuclei and, at concentrations above 50 nM, it causes a strong $G_2$-M block[1].

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

Cell Cytotoxicity Assay[1]

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| Cell Line: | Human cancer cell lines (SK-OV-3, MDA-MB-435, MDA-MB-468, LnCaP, and Hela cells). |
| Concentration: | 0-50 nM |

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| Incubation Time: | 72 hours |
| Result: | The $IC_{50}$ values are 24±8 nM, 21±4 nM, 18±6 nM, 22±7 nM and 40 nM in SK-OV-3, MDA-MB-435, MDA-MB-468, LnCaP and Hela cells. |

**In Vivo**

Cevipabulin (TTI-2370)( 5, 10, 15, and 20 mg/kg, every 4 days for 4 cycles, in mice) is active by i.v. and p.o. administration against human tumor xenografts, showing dose-dependent effects, with good antitumor activity at 20 and 15 mg/kg[1].

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

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| Animal Model: | Athymic nu/nu female mice implanted s.c. in the flank with $1\times10^7$ LoVo human colon adenocarcinoma cells[1]. |
| Dosage: | 5, 10, 15, and 20 mg/kg |
| Administration: | I.V. injection every 4 days for 4 cycles. |
| Result: | The compound showed dose-dependent effects, with good antitumor activity at 20 and 15 mg/kg. |

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| Animal Model: | Athymic nu/nu female mice implanted s.c. in the flank with $1\times10^6$ U87-MG human glioblastoma cells[1]. |
| Dosage: | 25 mg/kg. |
| Administration: | P.O. or I.V. on days 0, 7, 14. |
| Result: | The compound was active by p.o. or i.v. administration against human tumor xenografts. |

## CUSTOMER VALIDATION

- Biochem Biophys Res Commun. 2019 Aug 27;516(3):760-764.
- Polym J. 52, 969-976 (2020).

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## REFERENCES

[1]. Beyer CF, et al. TTI-237: a novel microtubule-active compound with in vivo antitumor activity. Cancer Res. 2008 Apr 1;68(7):2292-300.

[2]. Beyer CF, et al. The microtubule-active antitumor compound TTI-237 has both DB01229-like and Leurocristine-like properties. Cancer Chemother Pharmacol. 2009 Sep;64(4):681-9.

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

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