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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Cysmethynil

Cat. No.: HY-16160

CAS No.: 851636-83-4

Molecular Formula: $C_{25}H_{32}N_2O$

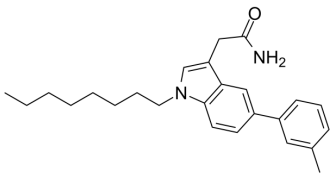
Molecular Weight: 376.53

Target: Autophagy; ICMT

Pathway: Autophagy; GPCR/G Protein

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 : 100 mg/mL (265.58 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6558 mL	13.2792 mL	26.5583 mL
	5 mM	0.5312 mL	2.6558 mL	5.3117 mL
	10 mM	0.2656 mL	1.3279 mL	2.6558 mL

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

BIOLOGICAL ACTIVITY

Description

Cysmethynil is an Icmt inhibitor(IC_{50} = 2.4 μM). Cysmethynil inhibites RAS membrane binding and EGF signal transduction. Cysmethynil prevents the cells in the G1 phase and induces autophagy. Cysmethynil inhibits PC3 cells proliferation, has synergistic effect with Paclitaxel (HY-B0015) and Doxorubicin (HY-15142A). Cysmethynil has anti-tumor effects and can be used for solid tumor (such as prostate cancer et al.) research[1][2][3].

IC_{50} & Target

IC_{50} = 2.4 μM for Icmt

In Vitro

Cysmethynil (15 μM or 20 μM or 30 μM; 6 days) inhibits $Icmt^{+/+}$ cells and $Icmt^{-/-}$/ICMT cells proliferation, unaffects $Icmt^{-/-}$cells growth [1].

Cysmethynil (20-30 μM; 1-6 days) inhibits PC3 cells proliferation and results in a dose- and time-dependent reduction in the number of viable PC3 cells[2].

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

Cell Viability Assay

Cell Line:	PC3 cells[2]
Concentration:	20-30 μM cysmethynil
Incubation Time:	1-6 days
Result:	Resulted in a dose- and time-dependent reduction in the number of viable PC3 cells.

In Vivo

Cysmethynil (100 mg/kg, 200 mg/kg; intraperitoneal injection; every 48 h; 28 day) without adverse effects on mice body weight, significantly impacts on tumor growth, causes both an accumulation of cells in the G1 phase and cell death [2]. Cysmethynil (20 mg/kg; intraperitoneal injection; three times a week; 2 weeks; alone or combined with Paclitaxel (HY-B0015)/ Doxorubicin (HY-15142A)) is not toxic to mice and induces only moderate inhibition of tumor growth as single agent, the combination with Paclitaxel(HY-B0015)/ Doxorubicin(HY-15142A) results in significantly greater efficacy in inhibiting tumor growth. Cysmethynil sensitizes cervical cancer cells to chemotherapy agent in xenograft mouse model[3].

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

Animal Model:	6 week-old SCID mice with SiHa cells in the mice flank [3]
Dosage:	20 mg/kg (single; combination with Paclitaxel or Doxorubicin)
Administration:	intraperitoneal injection; three times a week; 2 weeks
Result:	Decreased in tumor size when treated with Cys alone, or Cysmethynil+Paclitaxel(HY-B0015)/Cysmethynil+ Doxorubicin(HY-15142A) .

Animal Model:	SCID mice with PC3 cells in a xenograft model[2]
Dosage:	0.1 mg/g or 0.2 mg/g Cysmethynil
Administration:	intraperitoneal injection; every 48 h; 28 days
Result:	Decreased in tumor size when treated with both doses of cysmethynil.

REFERENCES

[1]. Winter-Vann AM, et al. A small-molecule inhibitor of isoprenylcysteine carboxyl methyltransferase with antitumor activity in cancer cells. Proc Natl Acad Sci U S A. 2005 Mar 22;102(12):4336-41.

[2]. Wang M, et al. A small molecule inhibitor of isoprenylcysteine carboxymethyltransferase induces autophagic cell death in PC3 prostate cancer cells. J Biol Chem. 2008 Jul 4;283(27):18678-84.

[3]. Pan Q, et al. Inhibition of isoprenylcysteine carboxylmethyltransferase sensitizes common chemotherapies in cervical cancer via Ras-dependent pathway. Biomed Pharmacother. 2018 Mar;99:169-175.

[4]. Zhu C, et al. Targeting KRAS mutant cancers: from druggable therapy to drug resistance. Mol Cancer. 2022 Aug 4;21(1):159.

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