Maytansine

Cat. No.: HY-13674

CAS No.: 35846-53-8

Molecular Formula: $C_{34}H_{46}ClN_3O_{10}$

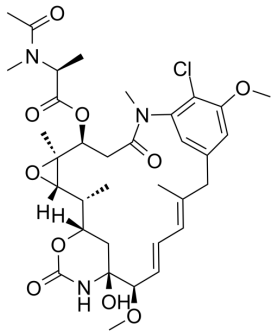
Molecular Weight: 692

Target: Microtubule/Tubulin

Pathway: Cell Cycle/DNA Damage; Cytoskeleton

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 (144.51 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.4451 mL	7.2254 mL	14.4509 mL
	5 mM	0.2890 mL	1.4451 mL	2.8902 mL
	10 mM	0.1445 mL	0.7225 mL	1.4451 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (3.61 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.61 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.61 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Maytansine is a highly potent microtubule-targeted compound that induces mitotic arrest and kills tumor cells at subnanomolar concentrations[1].

In Vitro

Maytansine, at $6x10^{-8}$ M, irreversibly inhibits cell division in eggs of sea urchins and clams. Maytansine causes the disappearance of a mitotic apparatus or prevents one from forming if added at early stages. Maytansine inhibits in vitro polymerization of tubulin[2].

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

REFERENCES

[1]. Lopus M, et al. Maytansine and cellular metabolites of antibody-maytansinoid conjugates strongly suppress microtubule dynamics by binding to microtubules. Mol Cancer Ther. 2010;9(10):2689-2699.

[2]. Remillard S, et al. Antimitotic activity of the potent tumor inhibitor maytansine. Science. 1975;189(4207):1002-1005.

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