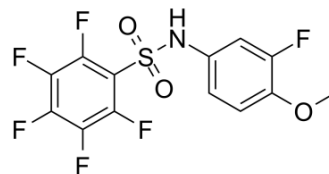


Batabulin

Cat. No.:	HY-13563		
CAS No.:	195533-53-0		
Molecular Formula:	C ₁₃ H ₇ F ₆ NO ₃ S		
Molecular Weight:	371.26		
Target:	Microtubule/Tubulin; Apoptosis		
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis		
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 (269.35 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
Preparing Stock Solutions	1 mM	2.6935 mL	13.4677 mL	26.9353 mL
	5 mM	0.5387 mL	2.6935 mL	5.3871 mL
	10 mM	0.2694 mL	1.3468 mL	2.6935 mL
Please refer to the solubility information to select the appropriate solvent.				
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.73 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.73 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.73 mM); Clear solution 			

BIOLOGICAL ACTIVITY

Description	Batabulin (T138067) is an antitumor agent, which binds covalently and selectively to a subset of the β-tubulin isotypes, thereby disrupting microtubule polymerization. Batabulin affects cell morphology and leads to cell-cycle arrest ultimately induces apoptotic cell death ^[1] .
IC₅₀ & Target	β-tubulin ^[1]
In Vitro	Batabulin (T138067; 30-300 nM; 24 hours; MCF7 cells) treatment shows approximately 25-30% tetraploid (4n) DNA content in

cells, indicating an arrest at the G2/M cell-cycle boundary^[1].

Batabulin (T138067; 30-300 nM; 24-48 hours; MCF7 cells) treatment shows 25-30% apoptosis. After a 48-hr exposure to 100 nM Batabulin, approximately 50-80% of the cell population is undergoing apoptosis^[1].

Batabulin (T138067) binds covalently and selectively to a subset of the β -tubulin isotypes, thereby disrupting microtubule polymerization. Covalent modification occurs at a conserved Cys-239 shared by the β 1, β 2, and β 4 tubulin isotypes. Cells exposed to Batabulin become altered in shape, indicating a collapse of the cytoskeleton, and show an increase in chromosomal ploidy^[1].

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

Cell Cycle Analysis^[1]

Cell Line:	MCF7 cells
Concentration:	30 nM, 100 nM and 300 nM
Incubation Time:	24 hours
Result:	Showed an arrest at the G2/M cell-cycle boundary.

Apoptosis Analysis^[1]

Cell Line:	MCF7 cells
Concentration:	30 nM, 100 nM and 300 nM
Incubation Time:	24 hours or 48 hours
Result:	25-30% of cells showed the reduced DNA content characteristic of apoptotic cells.

In Vivo

Batabulin (T138067; 40 mg/kg; intraperitoneal injection; once per week; on days 5, 12, and 19; male athymic nude mice) treatment impairs the growth of the drug-sensitive CCRF-CEM tumors^[1].

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

Animal Model:	Male athymic nude mice (nu/nu) (6-8 week-old, 20-25 g) injected with CCRF-CEM cells ^[1]
Dosage:	40 mg/kg
Administration:	Intraperitoneal injection; once per week; on days 5, 12, and 19
Result:	Impaired the growth of the drug-sensitive CCRF-CEM tumors.

REFERENCES

[1]. Shan B, et al. Selective, covalent modification of beta-tubulin residue Cys-239 by T138067, an antitumor agent with in vivo efficacy against multidrug-resistant tumors. Proc Natl Acad Sci U S A. 1999 May 11;96(10):5686-91.

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

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