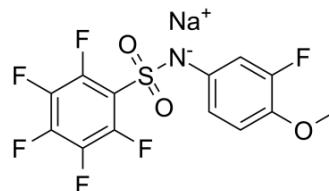


Batabulin sodium

Cat. No.:	HY-13563A		
CAS No.:	195533-98-3		
Molecular Formula:	C ₁₃ H ₆ F ₆ NNaO ₃ S		
Molecular Weight:	393.24		
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 : 125 mg/mL (317.87 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	2.5430 mL	12.7149 mL	25.4298 mL
5 mM	0.5086 mL	2.5430 mL	5.0860 mL
10 mM	0.2543 mL	1.2715 mL	2.5430 mL

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

BIOLOGICAL ACTIVITY

Description

Batabulin sodium (T138067 sodium) is an antitumor agent, which binds covalently and selectively to a subset of the β -tubulin isotypes, thereby disrupting microtubule polymerization. Batabulin sodium 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.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA