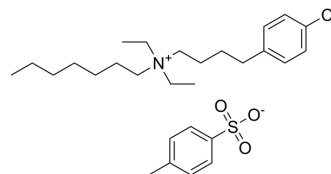


## Clofilium tosylate

<b>Cat. No.:</b>	HY-33350
<b>CAS No.:</b>	92953-10-1
<b>Molecular Formula:</b>	C <sub>28</sub> H <sub>44</sub> ClNO <sub>3</sub> S
<b>Molecular Weight:</b>	510.17
<b>Target:</b>	Potassium Channel; Apoptosis
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Apoptosis
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (196.01 mM; Need ultrasonic)  
H<sub>2</sub>O : 1.59 mg/mL (3.12 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.9601 mL	9.8007 mL	19.6013 mL
	5 mM	0.3920 mL	1.9601 mL	3.9203 mL
	10 mM	0.1960 mL	0.9801 mL	1.9601 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (4.08 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (4.08 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (4.08 mM); Clear solution
- Add each solvent one by one: 8 g/L NaCl solution  
Solubility: 2 mg/mL (3.92 mM); Clear solution; Need ultrasonic

### BIOLOGICAL ACTIVITY

#### Description

Clofilium tosylate, a potassium channel blocker, induces apoptosis of human promyelocytic leukemia (HL-60) cells via Bcl-2-insensitive activation of caspase-3. Antiarrhythmic agent<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

Potassium channel<sup>[1]</sup>

## In Vitro

HL-60 cells treated with Clofilium (0-20  $\mu\text{M}$ ; 24, 48, and 72 hours) lead to suppression of viability and proliferation in both time and concentration-dependent manners. Cell viability decreases significantly in HL-60 cells treated with 2.5  $\mu\text{M}$  to 10  $\mu\text{M}$  of Clofilium<sup>[1]</sup>.

?Clofilium (10  $\mu\text{M}$ , 12 hours) induces the proteolytic cleavage of inactive procaspase-3, p34 into its active form, p17 and subsequent cleavage of its substrate PARP at 2 h after exposure to 10 mM Clofilium. However, there is no significant change in expression of Bcl-2 and Bax proteins<sup>[1]</sup>.

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

### Cell Viability Assay<sup>[1]</sup>

Cell Line:	HL-60 cells
Concentration:	0-20 $\mu\text{M}$
Incubation Time:	24, 48, and 72 hours
Result:	Inhibited HL-60 cells with IC <sub>50</sub> s of 6.3 $\mu\text{M}$ for 24 hours, 3.4 $\mu\text{M}$ for 48 hours, 2.4 $\mu\text{M}$ for 72 hours, respectively.

### Western Blot Analysis<sup>[1]</sup>

Cell Line:	HL-60 cells
Concentration:	10 $\mu\text{M}$
Incubation Time:	12 hours
Result:	Induced proteolytic cleavage of caspase-3 and subsequent cleavage of its substrate, PARP, while Bcl-2 and Bax proteins were unaltered.

## REFERENCES

[1]. Choi BY, et al. Clofilium, a potassium channel blocker, induces apoptosis of human promyelocytic leukemia (HL-60) cells via Bcl-2-insensitive activation of caspase-3. Cancer Lett. 1999 Dec 1;147(1-2):85-93.

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

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