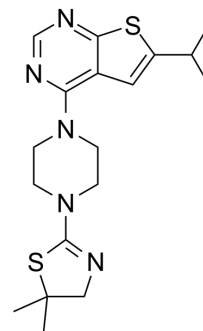


## MI-3

Cat. No.:	HY-15223
CAS No.:	1271738-59-0
Molecular Formula:	C <sub>18</sub> H <sub>25</sub> N <sub>5</sub> S <sub>2</sub>
Molecular Weight:	375.55
Target:	Epigenetic Reader Domain; Apoptosis
Pathway:	Epigenetics; Apoptosis
Storage:	Powder    -20°C    3 years 4°C    2 years In solvent   -80°C    2 years -20°C    1 year



## SOLVENT & SOLUBILITY

In Vitro	DMSO : 8.33 mg/mL (22.18 mM; Need ultrasonic)				
	Preparing Stock Solutions	<div>Solvent Concentration</div> <div>Mass</div>	1 mg	5 mg	10 mg
		1 mM	2.6628 mL	13.3138 mL	26.6276 mL
		5 mM	0.5326 mL	2.6628 mL	5.3255 mL
		10 mM	0.2663 mL	1.3314 mL	2.6628 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: ≥ 0.83 mg/mL (2.21 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.83 mg/mL (2.21 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 0.83 mg/mL (2.21 mM); Clear solution				

## BIOLOGICAL ACTIVITY

Description	MI-3 (Menin-MLL inhibitor 3) is a potent and high affinity menin-MLL inhibitor with an IC <sub>50</sub> of 648 nM and a K <sub>d</sub> of 201 nM <sup>[1]</sup> .
IC <sub>50</sub> & Target	IC <sub>50</sub> : 648 nM (menin-MLL); K <sub>d</sub> : 201 nM (menin-MLL) <sup>[1]</sup>
In Vitro	MI-3 (12.5-50 μM; HEK293 cells) treatment effectively inhibits the menin-MLL-AF9 interaction in human cells <sup>[1]</sup> . MI-3 (0-1.6 μM; 72 hours; KOPN-8 and MV4;11 cells) treatment shows an effective and dose-dependent growth inhibition in KOPN-8, MV4 and ME-1 cells <sup>[1]</sup> .

MI-3 (12.5-50  $\mu$ M; 48 hours; MV4;11 cells) treatment results in a substantial, and dose-dependent increase in Annexin V and AnnexinV/propidium iodide (PI) cells, demonstrating an increase in the number of cells undergoing apoptosis<sup>[1]</sup>.  
MI-3 (6.25-25  $\mu$ M; 6 days; THP-1 cells) treatment results in substantially reduced expression of HOXA9 and MEIS1<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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

Cell Line:	HEK293 cells
Concentration:	12.5 $\mu$ M, 25 $\mu$ M, 50 $\mu$ M
Incubation Time:	
Result:	Very effectively inhibited the menin-MLL-AF9 interaction in human cells.

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

Cell Line:	KOPN-8 and MV4;11 cells
Concentration:	0 $\mu$ M, 0.4 $\mu$ M, 0.8 $\mu$ M, 1.2 $\mu$ M, 1.6 $\mu$ M
Incubation Time:	72 hours
Result:	Showed an effective and dose-dependent growth inhibition in KOPN-8 and MV4;11 cells.

#### Apoptosis Analysis<sup>[1]</sup>

Cell Line:	MV4;11 cells
Concentration:	12.5 $\mu$ M, 25 $\mu$ M, 50 $\mu$ M
Incubation Time:	48 hours
Result:	Resulted in an increase in the number of cells undergoing apoptosis.

#### RT-PCR<sup>[1]</sup>

Cell Line:	THP-1 cells
Concentration:	6.25 $\mu$ M, 12.5 $\mu$ M, 25 $\mu$ M
Incubation Time:	6 days
Result:	Resulted in substantially reduced expression of HOXA9 and MEIS1.

## CUSTOMER VALIDATION

- Clin Transl Med. 2022 Aug;12(8):e982.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Grembecka J, et al. Menin-MLL inhibitors reverse oncogenic activity of MLL fusion proteins in leukemia. Nature Chemical Biology (2012), 8(3), 277-284.

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

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