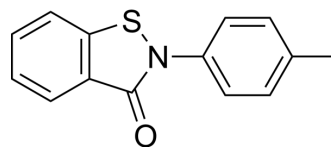


## PBIT

<b>Cat. No.:</b>	HY-101451		
<b>CAS No.:</b>	2514-30-9		
<b>Molecular Formula:</b>	C <sub>14</sub> H <sub>11</sub> NOS		
<b>Molecular Weight:</b>	241.31		
<b>Target:</b>	Histone Demethylase		
<b>Pathway:</b>	Epigenetics		
<b>Storage:</b>	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



## SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 50 mg/mL (207.20 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		4.1440 mL	20.7202 mL	41.4405 mL
		<b>5 mM</b>		0.8288 mL	4.1440 mL	8.2881 mL
	<b>10 mM</b>		0.4144 mL	2.0720 mL	4.1440 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (10.36 mM); Clear solution  2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (10.36 mM); Suspended solution; Need ultrasonic					

## BIOLOGICAL ACTIVITY

<b>Description</b>	PBIT is a specific inhibitor of the Jumonji AT-rich Interactive Domain 1 (JARID1) enzymes. PBIT inhibits JARID1B (KDM5B or PLU1) histone demethylase with an IC <sub>50</sub> of about 3 μM . PBIT also inhibits JARID1A and JARID1C with IC <sub>50</sub> s of 6 μM and 4.9 μM, respectively <sup>[1]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	KDM5
<b>In Vitro</b>	PBIT inhibits proliferation of cells expressing higher levels of JARID1B. PBIT (1-10 μM for UACC-812 cells, 2.5-10μM for MCF7 and MCF10A cells; 72 hours) inhibits cell proliferation in a JARID1B level-dependent manner <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Proliferation Assay <sup>[1]</sup>

Cell Line:	Human breast cancer cell lines (UACC-812 and MCF7) and human mammary epithelial cells (MCF10A)
Concentration:	1, 3, and 10 $\mu$ M for UACC-812 cells; 2.5, 5, and 10 $\mu$ M for MCF7 and MCF10A cells
Incubation Time:	72 hours
Result:	Inhibited cell proliferation in a JARID1B level-dependent manner. 10 $\mu$ M killed most of the UACC-812 cells, but showed minimal toxicity to MCF7 cells and MCF10A cells.

## CUSTOMER VALIDATION

- RNA. 2024 Jan 31:rna.079865.123.
- Cytokine. 2023 Dec 31:175:156451.

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

## REFERENCES

[1]. Sayegh J, et al. Identification of small molecule inhibitors of Jumonji AT-rich interactive domain 1B (JARID1B) histone demethylase by a sensitive high throughput screen. J Biol Chem. 2013 Mar 29;288(13):9408-17.

**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](mailto:tech@MedChemExpress.com)

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