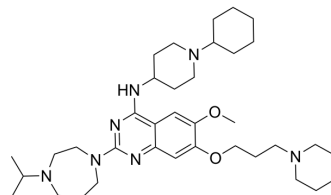


## UNC0646

<b>Cat. No.:</b>	HY-13807		
<b>CAS No.:</b>	1320288-17-2		
<b>Molecular Formula:</b>	C <sub>36</sub> H <sub>59</sub> N <sub>7</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	621.9		
<b>Target:</b>	Histone Methyltransferase		
<b>Pathway:</b>	Epigenetics		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DCM : ≥ 50 mg/mL (80.40 mM)  
 DMSO : 33.33 mg/mL (53.59 mM; Need ultrasonic)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.6080 mL	8.0399 mL	16.0798 mL
	5 mM	0.3216 mL	1.6080 mL	3.2160 mL
	10 mM	0.1608 mL	0.8040 mL	1.6080 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: ≥ 4.55 mg/mL (7.32 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (4.02 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (4.02 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

UNC0646 is a potent and selective histone methyltransferase G9a inhibitor with an IC<sub>50</sub> of 6 nM. UNC0646 is also a potent GLP inhibitor (IC<sub>50</sub> <15 nM) and highly selective for G9a/GLP over SETD7, SUV39H2, SETD8 and PRMT3. UNC0646 reduces H3K9me2 levels in MDA-MB-231 cells with an IC<sub>50</sub> of 26 nM<sup>[1]</sup>.

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

G9a	GLP
-----	-----

	6 nM (IC <sub>50</sub> )	<15 nM (IC <sub>50</sub> )
<b>In Vitro</b>	UNC0646 (Compound 6) has high cellular potency and excellent separation of functional potency versus cell toxicity in a variety of cell lines. UNC0646 is highly potent in reducing H3K9me2 levels and has low cell toxicity. UNC0646 reduces H3K9me2 levels with ICW IC <sub>50</sub> values of 26 nM, 10 nM, 12 nM, 14 nM, 68 nM, 86 nM and 10 nM in MDA-MB-231, MCF7, PC3, 22RV1, HCT116 wt, HCT 116 p53 <sup>-/-</sup> and IMR90 cell lines, respectively <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

## CUSTOMER VALIDATION

- Cell Death Dis. 2022 Aug 17;13(8):717.

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

## REFERENCES

[1]. Liu F, et al. Optimization of cellular activity of G9a inhibitors 7-aminoalkoxy-quinazolines. J Med Chem. 2011 Sep 8;54(17):6139-50.

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

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