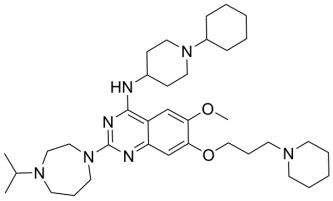
UNC0646

Cat. No.:	HY-13807
CAS No.:	1320288-17-2
Molecular Formula:	$C_{36}H_{59}N_7O_2$
Molecular Weight:	621.9
Target:	Histone Methyltransferase
Pathway:	Epigenetics
Storage:	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

Concentration \ Solvent \ 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

1. 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
2. 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
3. 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_{50} of 6 nM. UNC0646 is also a potent GLP inhibitor (IC_{50} <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_{50} of 26 nM[1].

IC_{50} & Target	G9a	GLP

	6 nM (IC_{50})	<15 nM (IC_{50})
In Vitro	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_{50} 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 $p53^{-/-}$ and IMR90 cell lines, respectively[1]. 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

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.

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