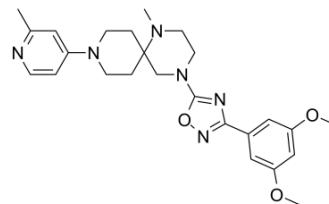


MRK-740

Cat. No.:	HY-114209		
CAS No.:	2387510-80-5		
Molecular Formula:	C ₂₅ H ₃₂ N ₆ O ₃		
Molecular Weight:	464.56		
Target:	Histone Methyltransferase		
Pathway:	Epigenetics		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 40 mg/mL (86.10 mM; Need ultrasonic and warming)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.1526 mL	10.7629 mL	21.5257 mL
		5 mM	0.4305 mL	2.1526 mL	4.3051 mL
10 mM		0.2153 mL	1.0763 mL	2.1526 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: ≥ 2.5 mg/mL (5.38 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.38 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.38 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	MRK-740 is a potent, selective and substrate-competitive PRDM9 histone methyltransferase inhibitor with an IC ₅₀ of 80 nM. MRK-740 is more selective for PRDM9 than other histone methyltransferases and other non-epigenetic targets. MRK-740 reduces PRDM9-dependent trimethylation of H3K4 (IC ₅₀ = 0.8 μM) ^[1] .
IC ₅₀ & Target	IC ₅₀ : 80 nM (PRDM9) ^[1]
In Vitro	After 24 h of treatment, MRK-740 (3 μM) does not affect HEK293T cell growth at the IC ₉₀ , but some toxicity is observed at 10

μ M. MRK-740 is an equipotent inhibitor of H3K4 methylation in MCF7 cells. In cells, MRK-740 specifically and directly inhibits H3K4 methylation at endogenous PRDM9 target loci^[1].

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

REFERENCES

[1]. Abdellah Allali-Hassani, et al. Discovery of a Chemical Probe for PRDM9. Nat Commun. 2019 Dec 17;10(1):5759.

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

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