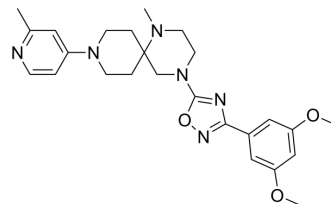


MRK-740

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)

Concentration	Solvent	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

- 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
- 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
- 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 IC₅₀ 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 (IC₅₀ = 0.8 μM)^[1].

IC₅₀ & Target

IC₅₀: 80 nM (PRDM9)^[1]

In Vitro

After 24?h of treatment, MRK-740 (3?μM) does not affect HEK293T cell growth at the IC₉₀, but some toxicity is observed at

10³μM. 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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