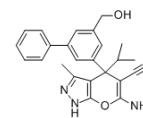


SHIN1

Cat. No.:	HY-112066		
CAS No.:	2146095-85-2		
Molecular Formula:	C ₂₄ H ₂₄ N ₄ O ₂		
Molecular Weight:	400.47		
Target:	Others		
Pathway:	Others		
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 : ≥ 50 mg/mL (124.85 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		2.4971 mL	12.4853 mL	24.9707 mL
	5 mM		0.4994 mL	2.4971 mL	4.9941 mL
	10 mM		0.2497 mL	1.2485 mL	2.4971 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

SHIN1 is a human serine hydroxymethyltransferase 1 and 2 (SHMT1/2) inhibitor with IC₅₀s of 5 and 13 nM, respectively, in an in vitro assay.

IC₅₀ & Target

IC₅₀: 5 nM (SHMT1), 13 nM (SHMT1)^[1]

In Vitro

SHIN1 inhibits human SHIN1 SHMT1/2 with IC₅₀s of 5 and 13 nM, respectively in an in vitro assay. SHIN1 inhibits the growth of SHMT2 deletion HCT-116 cells with an IC₅₀ of 10 nM. SHIN1 inhibits SHMT1/2 in HCT-116 cells. SHIN1 is particularly active against B-cell malignancies. SHIN1 blocks cell growth through a progressive depletion of purines, leading to loss of nucleotide triphosphates^[1].

PROTOCOL

Cell Assay ^[1]

For proliferation assays, HCT-116 cells are treated with SHIN1 (1, 10, 100, 1000, 10000 nM) for 24-72 hours. Cell number was counted directly using Trypan blue and the Countess system^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ducker GS, et al. Human SHMT inhibitors reveal defective glycine import as a targetable metabolic vulnerability of diffuse large B-cell lymphoma. Proc Natl Acad Sci U S A. 2017 Oct 24;114(43):11404-11409.

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

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