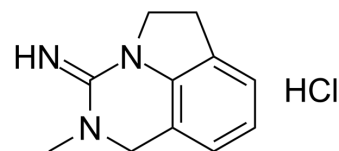


JBSNF-000028 hydrochloride

Cat. No.:	HY-151500B
Molecular Formula:	C ₁₁ H ₁₄ ClN ₃
Molecular Weight:	223.7
Target:	Others
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 16.67 mg/mL (74.52 mM); ultrasonic and warming and heat to 60°C

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		4.4703 mL	22.3514 mL	44.7027 mL
	5 mM		0.8941 mL	4.4703 mL	8.9405 mL
	10 mM		0.4470 mL	2.2351 mL	4.4703 mL

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

BIOLOGICAL ACTIVITY

Description

JBSNF-000028 hydrochloride is an orally active nicotinamide N-methyltransferase (NNMT) inhibitor with IC₅₀s of 0.033 μM, 0.19 μM and 0.21 μM against human NNMT (hNNMT), monkey NNMT (mkNNMT), and mouse NNMT (mNNMT), respectively. JBSNF-000028 hydrochloride can be used for the research of metabolic disorders^[1].

IC₅₀ & Target

IC₅₀: 0.033 μM (hNNMT), 0.19 μM (mkNNMT), 0.21 μM (mNNMT)^[1]

In Vitro

JBSNF-000028 hydrochloride (24 h) inhibits NNMT activity with an EC₅₀ of 2.5 μM in U2OS cells^[1].
 JBSNF-000028 hydrochloride (10-100 μM; 72 h) has no cytotoxicity against HepG2 cells^[1].
 JBSNF-000028 hydrochloride binds below a hairpin structural motif at the nicotinamide pocket and stacks between Tyr-204 (from Hairpin) and Leu-164 (from central domain)^[1].
 JBSNF-000028 hydrochloride is inactive against a broad panel of targets related to metabolism and safety^[1].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

JBSNF-000028 hydrochloride (50 mg/kg; p.o.; twice daily for 27 days) improves glucose and lipid handling in mice with diet-induced obesity (DIO)^[1].
 JBSNF-000028 hydrochloride (50 mg/kg; p.o.; twice daily for 4 weeks) improves glucose tolerance in NNMT knockout mice with diet-induced obesity^[1].

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

REFERENCES

[1]. Ruf S, et al. Novel tricyclic small molecule inhibitors of Nicotinamide N-methyltransferase for the treatment of metabolic disorders. Sci Rep. 2022 Sep 14;12(1):15440.

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

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