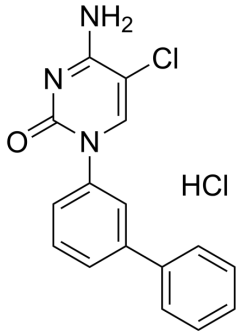
Bobcat339 hydrochloride

Cat. No.:	HY-111558A
CAS No.:	2436747-44-1
Molecular Formula:	$C_{16}H_{13}Cl_2N_3O$
Molecular Weight:	334.2
Target:	DNA Methyltransferase; TET Protein
Pathway:	Epigenetics
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 130 mg/mL (388.99 mM; Need ultrasonic)

H_2O : 0.1 mg/mL (0.30 mM; Need ultrasonic)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	2.9922 mL	14.9611 mL	29.9222 mL
5 mM	0.5984 mL	2.9922 mL	5.9844 mL
10 mM	0.2992 mL	1.4961 mL	2.9922 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: ≥ 2.08 mg/mL (6.22 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.22 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.22 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Bobcat339 hydrochloride is a potent and selective cytosine-based inhibitor of TET enzyme, with the IC_{50}s of 33 μM and 73 μM for TET1 and TET2, respectively. Bobcat339 hydrochloride is useful to the field of epigenetics and serves as a starting point for new therapeutics that target DNA methylation and gene transcription[1].

IC_{50} & Target

TET1	TET2
33 μM (IC_{50})	73 μM (IC_{50})

In Vitro

Bobcat339 (10 μM; 24 hours) significantly reduces global 5hmC levels by inhibiting TET enzyme function in HT-22 cells[1].

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

CUSTOMER VALIDATION

- Theranostics. 2021 Jun 11;11(16):7640-7657.
- Environ Sci Technol. 2021 Feb 11.
- Cancers (Basel). 2022 Jun 16;14(12):2983.
- Bioelectrochemistry. 2023 Apr 4;152:108433.
- Aquaculture. 2023: 739234.

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REFERENCES

[1]. Chua GNL, et al. Cytosine-Based TET Enzyme Inhibitors. ACS Med Chem Lett. 2019 Jan 31;10(2):180-185.

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