Seclidemstat

Cat. No.: HY-103713

CAS No.: 1423715-37-0

Molecular Formula: $C_{20}H_{23}ClN_4O_4S$

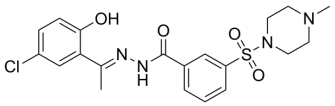
Molecular Weight: 450.94

Target: Histone Demethylase

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 : 50 mg/mL (110.88 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2176 mL	11.0879 mL	22.1759 mL
	5 mM	0.4435 mL	2.2176 mL	4.4352 mL
	10 mM	0.2218 mL	1.1088 mL	2.2176 mL

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

In Vivo

1. Add each solvent one by one: 0.5% CMC-Na/saline water
   Solubility: 10 mg/mL (22.18 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.61 mM); Clear solution
3. Add each solvent one by one: 1.6% DMA >> 5% Ethanol >> 45% PEG400 >> 48.4% PBS
   Solubility: 2 mg/mL (4.44 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

Seclidemstat is a potent noncompetitive and reversible KDM1A (LSD1) inhibitor (K_i=31 nM, IC_{50}=13 nM). Seclidemstat promotes antitumor immunity in switch/sucrose nonfermentable (SWI/SNF) complex mutated ovarian cancer, as well as inhibit virus production, viral DNA replication, and late gene expression. Seclidemstat can be used for the research of Ewing Sarcoma[1][2].

IC_{50} & Target

KDM1/LSD1

In Vitro	Seclidemstat (72 hours) inhibits SWI/SNF-mutation-dependent tumor cell proliferation with IC_{50} ranging from 0.013 to 2.819 μM (COV434, BIN67, SCCOHT-1, TOV21G, SKOV3, A427, H522, A549, H1299, G401, G402, HCC15 cells)[2]. ?Seclidemstat (72 hours) promotes endogenous retroviruses (ERVs) expression and activation of IFNβ pathway in SCCOHT cell lines (SCCOHT-1, BIN67, and COV434 cells)[2]. ?Seclidemstat (3 μM) promotes PD-L1 expression in SCCOHT COV 434 pIND 20 BRG1-2.7 cell line[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Cell Biol. 2022 Feb 17.
- ACS Pharmacol Transl Sci. November 12, 2021.
- bioRxiv. 2020 May.

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REFERENCES

[1]. Dai XJ, et al. Reversible Lysine Specific Demethylase 1 (LSD1) Inhibitors: A Promising Wrench to Impair LSD1 [published correction appears in J Med Chem. 2021 May 13;64(9):6410-6411]. J Med Chem. 2021;64(5):2466-2488.

[2]. Soldi R, et al. The novel reversible LSD1 inhibitor SP-2577 promotes anti-tumor immunity in SWItch/Sucrose-NonFermentable (SWI/SNF) complex mutated ovarian cancer. PLoS One. 2020;15(7):e0235705. Published 2020 Jul 10.

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