LSD1-IN-24

Cat. No.: HY-149213

CAS No.: 4734-59-2

Molecular Formula: $C_{18}H_{20}N_2OS$

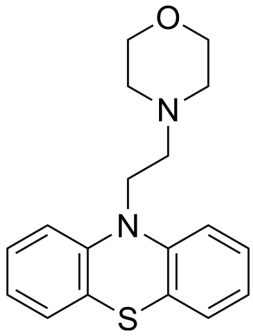
Molecular Weight: 312.43

Target: Histone Demethylase; PD-1/PD-L1

Pathway: Epigenetics; Immunology/Inflammation

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 : 100 mg/mL (320.07 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2007 mL	16.0036 mL	32.0072 mL
	5 mM	0.6401 mL	3.2007 mL	6.4014 mL
	10 mM	0.3201 mL	1.6004 mL	3.2007 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: 2.5 mg/mL (8.00 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

LSD1-IN-24(compound 3S) is a selective LSD1 inhibitor with IC_{50} = 0.247 μM. LSD1-IN-24 can mediate the expression of PD-L1 , enhance T cell killing response, and can be used in cancer research[1].

In Vitro

LSD1-IN-24 (compound 3S)(0-20 μM, 5 days) can reduce PD-L1 levels in an LSD1-dependent manner and enhance the T cell killing response of BGC-823 cells in a dose-dependent manner, but does not affect BGC -823 and MFC cell proliferation. Furthermore, it dose-dependently protects H3K4me1/2 but not H3K4me3 from demethylation[1].

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

In Vivo

LSD1-IN-24 (compound 3S) (0-50 mg/kg, oral gavage; daily for 2 weeks) inhibits in vivo MFC cell growth, tumor weight in a dose-dependent manner in a subcutaneous tumor model containing MFC cells Significantly decreased, tumor tissue Ki67 decreased significantly, and no obvious toxic effect on mice[1].

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

Animal Model:	Male 615 mice with MFC cell[1]
Dosage:	0, 10, 25, and 50 mg/kg
Administration:	Oral gavage; daily for 2 weeks
Result:	Significantly decreased intratumoral PD-L1 expression, increased $CD3^+$, $CD4^+$, $CD8^+$ cell numbers, interleukin-2 (IL2) and IFNγ mRNA and protein levels were also upregulated.

REFERENCES

[1]. Xing-Jie Dai, et al. Phenothiazine-Based LSD1 Inhibitor Promotes T-Cell Killing Response of Gastric Cancer Cells. J Med Chem. 2023 Mar 23;66(6):3896-3916.

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