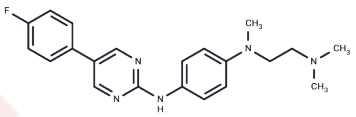
Data Sheet (Cat.No.T61405)

TargetMol

LSD1-IN-14

Chemical Properties



CAS No. : 2698340-11-1

Formula: C21H24FN5

Molecular Weight: 365.45

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	LSD1-IN-14, a powerful and specific inhibitor of LSD1 (with an IC50 value of 0.89 μM), effectively suppresses the growth of A549 and THP-1 cells and promotes the apoptosis of tumor cells [1].
Targets(IC50)	Apoptosis,Histone Demethylase,Others
In vitro	LSD1-IN-14 (compound x43) inhibits the proliferation of A549 and THP-1 cells at concentrations of 0-20 μM over 72 hours, with IC50 values of 1.62 μM and 1.21 μM, respectively [1]. At 0-3 μM, it increases H3K4me2 and H3K9me2 expression in A549 cells and induces apoptosis in 53.6% of these cells in a dose-dependent manner [1]. LSD1-IN-14 demonstrates metabolic stability in human liver microsomes with a half-life of 103.3 minutes, showing minimal inhibition of cytochrome P450 enzymes (Cl int(mic) value of 13.4 μL/min/mg at 1 mM for 60 minutes) [1]. This compound's antiproliferative effects, epigenetic modulation, and apoptosis induction make it a promising candidate for further research [1].
In vivo	LSD1-IN-14, administered at dosages of 2 mg/kg intravenously (i.v.) and 10 mg/kg intragastrically (i.g.) to male Sprague-Dawley rats, exhibits an acceptable half-life and oral bioavailability. Pharmacokinetic analysis revealed: for i.v. administration, a peak concentration (C max) of 41.1 ng/mL, a half-life (T 1/2) of 1.0 hour, a steady-state volume of distribution (Vd ss) of 6.6 L/kg, a clearance rate (Cl) of 156 mL/min/kg, and an area under the curve (AUC 0-t) of 126 ng.h/mL extending to 152 ng.h/mL (AUC 0-∞). For i.g. administration, the peak concentration reached 575 ng/mL at a T max of 0.8 hours, a half-life of 2.8 hours, with an AUC 0-t of 211 ng.h/mL extending to 214 ng.h/mL (AUC 0-∞), reflecting an oral bioavailability of 11.9%. These findings suggest LSD1-IN-14 has promising pharmacokinetic properties for further development.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7364 mL	13.6818 mL	27.3635 mL
5 mM	0.5473 mL	2.7364 mL	5.4727 mL
10 mM	0.2736 mL	1.3682 mL	2.7364 mL
50 mM	0.0547 mL	0.2736 mL	0.5473 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

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