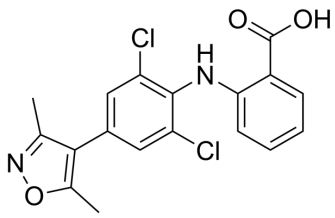
FB23

Cat. No.:	HY-137187
CAS No.:	2243736-35-6
Molecular Formula:	$C_{18}H_{14}Cl_2N_2O_3$
Molecular Weight:	377.22
Target:	Fat Mass and Obesity-associated Protein (FTO)
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (331.37 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6510 mL	13.2549 mL	26.5097 mL
	5 mM	0.5302 mL	2.6510 mL	5.3019 mL
	10 mM	0.2651 mL	1.3255 mL	2.6510 mL

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

BIOLOGICAL ACTIVITY

Description

FB23 is a potent and selective FTO demethylase inhibitor with an IC_{50} of 60 nM. FB23 directly binds to FTO and selectively inhibits FTO's mRNA N^6-methyladenosine (m6A) demethylase activity[1].

IC_{50} & Target

IC50: 60 nM (FTO)[1]

In Vitro

FB23 (72 hours) treatment inhibits acute myeloid leukemia (AML) cells proliferation with IC_{50} values of 44.8 μM, 23.6 μM for NB4 and MONOMAC6 AML cells[1].

FB23 treatment causes the significant suppression of MYC targets, E2F targets, and G2M checkpoint signal cascades, which may contribute to the inhibitory effects of FTO inhibitors and FTO KD on cell cycle and proliferation. FB23 treatments activates apoptosis and p53 pathways[1].

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

In Vivo

A single dose of 3 mg/kg FB23 is i.p. administrated to Sprague Dawley (SD) rats for the pharmacokinetic profile. The C_{max} and T_{max} value of FB23 are 142.5 ng/mL and 0.4 hr, respectively[1].

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

REFERENCES

[1]. Yue Huang, et al. Small-Molecule Targeting of Oncogenic FTO Demethylase in Acute Myeloid Leukemia. Cancer Cell. 2019 Apr 15;35(4):677-691.e10.

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