

Product Data Sheet

Product Name: FB23
Cat. No.: GC60833

Chemical Properties

Cas. No. 2243736-35-6

SMILES O=C(O)C1=CC=CC=C1NC2=C(Cl)C=C(C3=C(C)ON=C3C)C=C2Cl

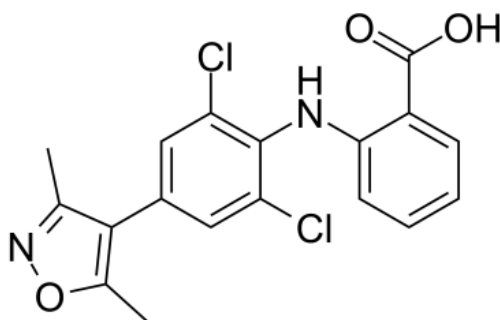
Formula $C_{18}H_{14}Cl_2N_2O_3$ M.Wt 377.22

Solubility DMSO: 125 mg/mL (331.37 mM) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

FB23 is a potent and selective fat-mass and obesity-associated protein (FTO) inhibitor with an IC₅₀ of 60 nM. FB23 directly binds to FTO and selectively inhibits FTO's mRNA N⁶-methyladenosine (m⁶A) demethylase activity[1].

FB23 (72 hours) treatment inhibits acute myeloid leukemia (AML) cells proliferation with IC₅₀ values of 44.8 μM, 23.6 μM for NB4 and MONOMAC6 AML cells[1]. FB23 treatment causes the significant

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Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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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].

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

[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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