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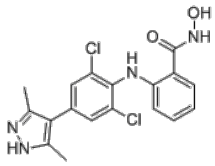
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	FTO inhibitor Dac51
Cat. No.	:	PC-38021
CAS No.	:	2243944-92-3
Molecular Formula	:	$C_{18}H_{16}Cl_2N_4O_2$
Molecular Weight	:	391.25
Target	:	Other Targets
Solubility	:	10 mM in DMSO



Biological Activity

FTO inhibitor Dac51 (Dac51, UUN44923) is a potent, small-molecule compound that can inhibit the activity of **m6A demethylase FTO**, inhibits FTO-mediated demethylation of m6A with IC50 of 0.4 uM.
Dac51 is a more potent inhibitor than FB23-2 that binds to and stabilizes FTO, stabilizes the thermal denaturation of the FTO protein in both B16-OVA and LLC cells.
Dac51 treatment B16-OVA and LLC cell lines increased m6A modification on most m6A-marked genes, including Jun and Cebpb.
Dac51 dampened the glycolytic capacity of tumor cells by inhibiting FTO-mediated demethylation on transcripts including Jun and Cebpb; Dac51 increases T cell infiltration and synergizes with anti-PD-L1 blockade in treated B16-OVA cells.
Dac51 treatment (2 mg/kg) effectively inhibited tumor growth in vivo, also significantly increased the proportion of infiltrated CD8+ T cells in the tumor microenvironment, Dac51 delivers strong T cell-mediated antitumor effects and prevents tumor recurrence via memory T cell responses.

References

Yi Liu, et al. ***Cell Metab.*** 2021 Jun 1;33(6):1221-1233.e11.

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