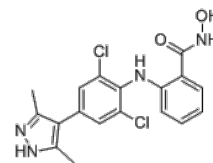

Product Name	: FTO inhibitor Dac51
Cat. No.	: PC-38021
CAS No.	: 2243944-92-3
Molecular Formula	: C ₁₈ H ₁₆ Cl ₂ N ₄ O ₂
Molecular Weight	: 391.25
Target	: Other Targets
Solubility	: 10 mM in DMSO



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 μ M.

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.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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