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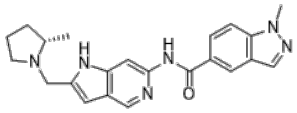
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	TDI-11055
Cat. No.	:	PC-49300
CAS No.	:	
Molecular Formula	:	$C_{22}H_{24}N_6O$
Molecular Weight	:	388.475
Target	:	Bromodomain
Solubility	:	10 mM in DMSO



Biological Activity

TDI-11055 (TDI 11055) is a potent, selective and orally bioavailable inhibitor of the acyl-lysine reader **ENL/AF9 YEATS domain** with IC50 of 0.05 and 0.07 uM, respectively.
TDI-11055 shows no inhibition of the YEATS domains of GAS41 and YEATS2 (IC50 > 100 μM), the other two YEATS domain-containing proteins.
TDI-11055 shows direct binding affinity to the ENL YEATS domain with Kd of 119 nM in isothermal titration calorimetry (ITC) assays.
TDI-11055 binds to and stabilizes endogenously expressed ENL but not GAS41 or YEATS2 in cells, binds directly to the acyl-binding site in ENL and engages with key acyl-recognizing residues.
TDI-11055 treatment led to a substantial displacement of ENL from target genes, including well-established leukemogenic genes in AML such as MYC and the HOXA cluster, TDI-11055 is a validated chemical tool for efficiently and specifically perturbing the chromatin reader function of ENL in living cells.
TDI-11055 inhibits the growth of MLL-r and NPM1-mutated leukemia cells in vitro (MV4;11 cell viability IC50=0.27 uM), decreases the expression of several key oncogenes in AML, including MYC, HOXA9/10, and MYB.
TDI-11055 impairs the clonogenic potential and induces differentiation of MLL-r and NPM1-mutated primary AML patient samples, blocks disease progression in models of MLL-r leukemia.

References

Yiman Liu, et al. ***Cancer Discov.*** 2022 Sep 2;CD-21-1307.

E-mail: tech@probechem.com