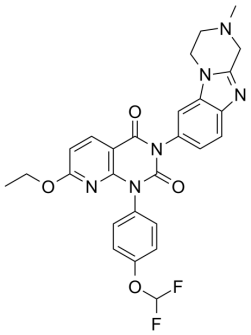
MAT2A-IN-10

Cat. No.:	HY-149915
CAS No.:	2924825-23-8
Molecular Formula:	$C_{27}H_{24}F_2N_6O_4$
Molecular Weight:	534.51
Target:	Methionine Adenosyltransferase (MAT)
Pathway:	Epigenetics; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

MAT2A-IN-10 (Compound 28) is an orally active MAT2A inhibitor with an IC_{50} of 26 nM. MAT2A-IN-10 can be used for the research of cancer[1].

IC_{50} & Target

IC50: 26 nM (MAT2A)[1]

In Vitro

MAT2A-IN-10 (Compound 28; 0.1 nM-10 μM; 4 days) inhibits HCT-116 (MTAP-/-) cell proliferation with an IC_{50} of 75 ± 5 nM but not inhibits HCT-116 (WT) proliferation[1].

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

Cell Proliferation Assay[1]

Cell Line:	HCT-116 (WT) and HCT-116 (MTAP-/-)
Concentration:	0.1 nM-10 μM
Incubation Time:	4 days
Result:	Inhibited cell proliferation with IC_{50}s of 75 ± 5 nM and >10000 nM against HCT-116 (MTAP-/-) and HCT-116 (WT) cells, respectively.

In Vivo

MAT2A-IN-10 (Compound 28; p.o.; once daily for 6 days) results in tumor regression in the HCT-116 (MTAP-/-) xenograft tumor model in BALB/c mice[1].

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

Animal Model:	BALB/c mice, HCT-116(MTAP-/-) xenograft mouse tumor model[1]
Dosage:	50 mg/kg
Administration:	PO, once daily for 6 days
Result:	Resulted in tumor regression. Induced a continuous decrease in tumor volume after day 6, and the tumor regression reached -52% at the end of treatment (day 18).

Animal Model:	Male ICR Mice[1]
Dosage:	10 mg/kg
Administration:	Oral (Pharmacokinetic Analysis)
Result:	Pharmacokinetic Properties of MAT2A-IN-10 (Compound 28) in Male ICR Mice (n = 3)[a]

route	dose [mg/kg]	T_{max} [h]	$T_{1/2}$ [h]	MRT [h]	C_{max} [ng/mL]	AUC [ng•h/mL]
po	10	0.67	2.98	4.71	6733	41192

[a] T_{max}, time for maximum plasma concentration; $T_{1/2}$, elimination half-life; MRT, mean residue time; C_{max}, maximum plasma concentration; AUC, area under drug time curve.

REFERENCES

[1]. Zhang S, et al. Design and Structural Optimization of Methionine Adenosyltransferase 2A (MAT2A) Inhibitors with High In Vivo Potency and Oral Bioavailability. J Med Chem. 2023 Apr 13;66(7):4849-4867.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA