FIDAS-5

Cat. No.: HY-136144

CAS No.: 1391934-98-7

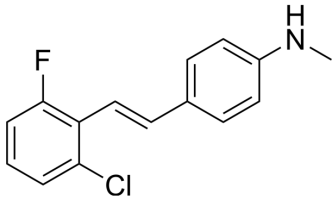
Molecular Formula: $C_{15}H_{13}ClFN$

Molecular Weight: 261.72

Target: Methionine Adenosyltransferase (MAT)

Pathway: Epigenetics; Metabolic Enzyme/Protease

Storage: Powder -20°C 3 years
4°C 2 years
* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (477.61 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.8209 mL	19.1044 mL	38.2088 mL
	5 mM	0.7642 mL	3.8209 mL	7.6418 mL
	10 mM	0.3821 mL	1.9104 mL	3.8209 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (7.95 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (7.95 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

FIDAS-5 is a potent and orally active methionine S-adenosyltransferase 2A (MAT2A) inhibitor with an IC_{50} of 2.1 μM. FIDAS-5 effectively competes against S-adenosylmethionine (SAM) for MAT2A binding. FIDAS-5 has anticancer activities[1].

IC_{50} & Target

IC50: 2.1 μM (Methionine S-adenosyltransferase 2A (MAT2A))[1]

In Vitro

FIDAS-5 (3 μM; 7 days; LS174T cells) treatment significantly inhibits the proliferation of LS174T cells[1].
FIDAS-5 (3 μM) treatment inhibits the expression of c-Myc and cyclinD1 in LS174T CRC cells. And FIDAS-5 induces the expression of cell cycle inhibitor, $p21^{WAF1/CIP1}$[1].
FIDAS-5 (3 μM; 36 h) treatment reduces the levels of both S-adenosylmethionine (SAM) and S-adenosylhomocysteine (SAH) in LS174T cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	LS174T colorectal cancer (CRC) cells
Concentration:	3 μM
Incubation Time:	7 days
Result:	Significantly inhibited the proliferation of LS174T cells.

In Vivo

FIDAS-5 (20 mg/kg; oral gavage; daily; for two weeks; athymic nude mice) treatment significantly inhibits the growth of xenograft tumors, with minimal difference in body weight[1].
Mice are treated with FIDAS-5 (20 mg/kg) for 1 week. The liver SAM levels are significantly reduced[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	16 athymic nude mice injected with HT29 CRC cells[1]
Dosage:	20 mg/kg
Administration:	Oral gavage; daily; for two weeks
Result:	Significantly inhibited the growth of xenograft tumors.

CUSTOMER VALIDATION

- Nat Metab. 2023 Nov 16.
- Development. 2023 Mar 28;dev.201135.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Zhang W, et al. Fluorinated N,N-dialkylaminostilbenes repress colon cancer by targeting methionine S-adenosyltransferase 2A. ACS Chem Biol. 2013 Apr 19;8(4):796-803.

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