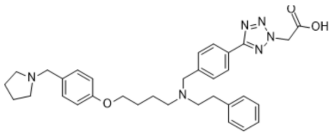
TH1834

Cat. No.:	HY-123604
CAS No.:	2108830-08-4
Molecular Formula:	$C_{33}H_{40}N_6O_3$
Molecular Weight:	568.71
Target:	Histone Acetyltransferase; Apoptosis
Pathway:	Epigenetics; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 10 mg/mL (17.58 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7584 mL	8.7918 mL	17.5837 mL
	5 mM	0.3517 mL	1.7584 mL	3.5167 mL
	10 mM	0.1758 mL	0.8792 mL	1.7584 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: ≥ 1 mg/mL (1.76 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1 mg/mL (1.76 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1 mg/mL (1.76 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TH1834 is a specific Tip60 (KAT5) histone acetyltransferase (HAT) inhibitor. TH1834 induces apoptosis and increases DNA damage in breast cancer. TH1834 does not affect the activity of related histone acetyltransferase MOF. Anticancer activity[1].

IC_{50} & Target

TIP60

In Vitro

TH1834 (0-500 μM; 1 hour; MCF7 cells) treatment significantly reduces the viability of MCF7 cells[1].
TH1834 (0-500 μM; 1 hour; MCF7 cells) treatment significantly increases cytotoxicity in MCF7 cells[1].

TH1834 (500 μM; 1 hour; MCF7 cells) treatment induces caspase 3 activation in MCF7 cells[1].
TH1834 significantly inhibits Tip60 activity in vitro and treating cells with TH1834 results in apoptosis and increased unrepaired DNA damage in breast cancer[1].

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

Cell Viability Assay[1]

Cell Line:	MCF7 cells
Concentration:	0 μM, 0.5 μM, 5 μM, 50 μM and 500 μM
Incubation Time:	1 hour
Result:	Significantly reduced the viability of MCF7 cells.

Cell Cytotoxicity Assay[1]

Cell Line:	MCF7 cells
Concentration:	0 μM, 0.5 μM, 5 μM, 50 μM and 500 μM
Incubation Time:	1 hour
Result:	Highly significant increase in cytotoxicity at all concentrations used.

Western Blot Analysis[1]

Cell Line:	MCF7 cells
Concentration:	500 μM
Incubation Time:	1 hour
Result:	Marked caspase 3 activation was observed in MCF7 cells in an independent assay.

CUSTOMER VALIDATION

- Oncol Res. 2024 Mar 20;32(4):625-641.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Gao C, et al. Rational design and validation of a Tip60 histone acetyltransferase inhibitor. Sci Rep. 2014 Jun 20;4:5372.

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