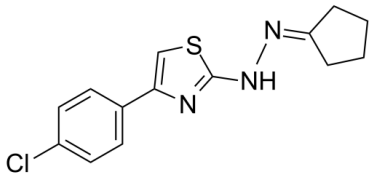
Data Sheet

Product Name:	CPTH2
Cat. No.:	CS-W013990
CAS No.:	357649-93-5
Molecular Formula:	$C_{14}H_{14}ClN_3S$
Molecular Weight:	291.80
Target:	Apoptosis; Histone Acetyltransferase
Pathway:	Apoptosis; Epigenetics
Solubility:	DMSO : 25 mg/mL (85.68 mM; Need ultrasonic); H2O : 1 mg/mL (3.43 mM; Need ultrasonic); Ethanol : 1 mg/mL (3.43 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

CPTH2 is a potent **histone acetyltransferase (HAT)** inhibitor. CPTH2 selectively inhibits the acetylation of histone H3 by **Gcn5**. CPTH2 induces **apoptosis** and decreases the invasiveness of a clear cell renal carcinoma (ccRCC) cell line through the inhibition of **acetyltransferase p300 (KAT3B)**[1][2]. **In Vitro:** CPTH2 (100 μM; 12, 24, 48 hours) causes a decrease in cell proliferation after as early as 12 h with a further significant reduction after 48 h stimulation[1].

CPTH2 (100 μM; 12 or 48 hours) causes a comparable drop of the activity in both cell lines[1].

CPTH2 (100 μM; 48 hours) produces a drastic increase in apoptotic/dead cell population after 48 h[1].

CPTH2 (100 μM; 12, 24, 48 hours) shows a reduced acetylation of both global AcH3 histone and H3AcK18[1].

CPTH2 (100 μM; 24, 48 hours) is capable to counteract invasion and migration of ccRCC-786-O cells in culture[1].

CPTH2 (0.2, 0.5, 1 mM) inhibits the growth of a GCN5 deleted strain and a single catalytic mutant E173H[2].

CPTH2 (0.6, 0.8 mM; for 24 hours) inhibits histone H3 acetylation in yeast cell cultures[2].

CPTH2 inhibits the Gcn5p dependent functional network[2].

References:

[1]. Cocco E, et al. KAT3B-p300 and H3AcK18/H3AcK14 levels are prognostic markers for kidney ccRCC tumoraggressiveness and target of KAT inhibitor CPTH2. Clin Epigenetics. 2018 Apr 4;10:44.

[2]. Chimenti F, et al. A novel histone acetyltransferase inhibitor modulating Gcn5 network: cyclopentylidene-[4-(4'-chlorophenyl)thiazol-2-yl)hydrazone. J Med Chem. 2009 Jan 22;52(2):530-6.

CAIndexNames:

Cyclopentanone, 2-[4-(4-chlorophenyl)-2-thiazolyl]hydrazone

SMILES:

ClC1=CC=C(C2=CSC(N/N=C3CCCC/3)=N2)C=C1

Caution: Product has not been fully validated for medical applications. For research use only.

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