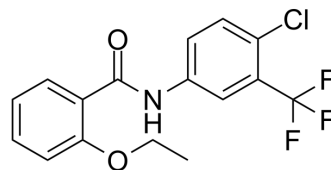


CTB

Cat. No.:	HY-134964
CAS No.:	451491-47-7
Molecular Formula:	C ₁₆ H ₁₃ ClF ₃ NO ₂
Molecular Weight:	343.73
Target:	Histone Acetyltransferase; Apoptosis
Pathway:	Epigenetics; Apoptosis
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (290.93 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.9093 mL	14.5463 mL	29.0926 mL	
		5 mM	0.5819 mL	2.9093 mL	5.8185 mL	
		10 mM	0.2909 mL	1.4546 mL	2.9093 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: ≥ 2.5 mg/mL (7.27 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (7.27 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	CTB (Cholera Toxin B subunit) is a potent p300 histone acetyltransferase activator ^[1] . CTB can effectively induce apoptosis in MCF-7 cells ^[2] .
IC ₅₀ & Target	p300
In Vitro	CTB (10, 50, 100, 150, 200, and 250 μM; 10 min) enhances p300 HAT activity of p300 in a dosedependent manner ^[1] . CTB (0-200 μM; 24 hours) inhibits the viability of MCF-7 cells with an IC ₅₀ of 85.43 μM ^[2] . CTB (85.43 μM; 24, 48 and 72 h) induces time dependence apoptosis of MCF-7 cells ^[2] . CTB (50 μM; 24 h) increases p300/CBP activity, and reduces autophagic flux in primary neurons ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay ^[2]

Cell Line:	MCF-7 cell
Concentration:	0-200 μ M
Incubation Time:	24 hours
Result:	Inhibit viability with an IC ₅₀ of 85.43 μ M.
Apoptosis Analysis ^[2]	
Cell Line:	MCF-7 cell
Concentration:	85.43 μ M
Incubation Time:	24, 48 and 72 h
Result:	Induced time-dependence apoptosis.

REFERENCES

- [1]. Mantelingu K, et al. Activation of p300 histone acetyltransferase by small molecules altering enzyme structure: probed by surface-enhanced Raman spectroscopy. *J Phys Chem B*. 2007;111(17):4527-4534.
- [2]. Chen X, et al. Promoting tau secretion and propagation by hyperactive p300/CBP via autophagy-lysosomal pathway in tauopathy. *Mol Neurodegener*. 2020;15(1):2. Published 2020 Jan 6.
- [3]. Dastjerdi MN, et al. The effect of CTB on P53 protein acetylation and consequence apoptosis on MCF-7 and MRC-5 cell lines. *Adv Biomed Res*. 2013;2:24. Published 2013 Mar 6.

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

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