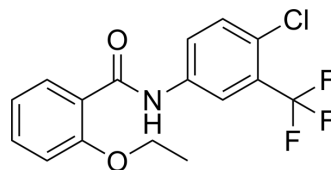


## CTB

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



## SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (290.93 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	<b>Preparing Stock Solutions</b>		1 mg	5 mg	10 mg
		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.					
<b>In Vivo</b>	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

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

Cell Line:	MCF-7 cell
Concentration:	0-200 $\mu$ M
Incubation Time:	24 hours
Result:	Inhibit viability with an IC <sub>50</sub> of 85.43 $\mu$ M.
Apoptosis Analysis <sup>[2]</sup>	
Cell Line:	MCF-7 cell
Concentration:	85.43 $\mu$ M
Incubation Time:	24, 48 and 72 h
Result:	Induced time-dependence apoptosis.

## CUSTOMER VALIDATION

- Cell Res. 2023 Jul 13.
- Inflammopharmacology. 2023 Apr 28.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## 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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