4-tert-Octylphenol

Cat. No.: HY-B1941

CAS No.: 140-66-9

Molecular Formula: $C_{14}H_{22}O$

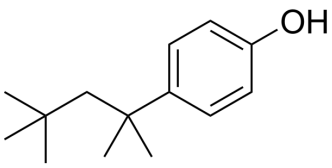
Molecular Weight: 206.32

Target: Endogenous Metabolite; Apoptosis; DNA/RNA Synthesis

Pathway: Metabolic Enzyme/Protease; Apoptosis; Cell Cycle/DNA Damage

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 : 100 mg/mL (484.68 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.8468 mL	24.2342 mL	48.4684 mL
5 mM	0.9694 mL	4.8468 mL	9.6937 mL
10 mM	0.4847 mL	2.4234 mL	4.8468 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 (12.12 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (12.12 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (12.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

4-tert-Octylphenol, a endocrine-disrupting chemical, is an estrogenic agent. 4-tert-Octylphenol induces apoptosis in neuronal progenitor cells in offspring mouse brain. 4-tert-Octylphenol reduces bromodeoxyuridine (BrdU), mitotic marker Ki67, and phospho-histone H3 (p-Histone-H3), resulting in a reduction of neuronal progenitor proliferation. 4-tert-Octylphenol disrupts brain development and behavior in mice[1].

IC_{50} & Target

Human Endogenous Metabolite

REFERENCES

[1]. Dinh Nam Tran, et al. 4-tert-Octylphenol Exposure Disrupts Brain Development and Subsequent Motor, Cognition, Social, and Behavioral Functions. Oxidative Medicine and Cellular Longevity, 2020.

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