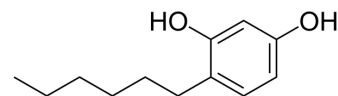


Hexylresorcinol

Cat. No.:	HY-B0986		
CAS No.:	136-77-6		
Molecular Formula:	C ₁₂ H ₁₈ O ₂		
Molecular Weight:	194.27		
Target:	Parasite; Bacterial; Apoptosis; Glucosidase		
Pathway:	Anti-infection; Apoptosis; Metabolic Enzyme/Protease		
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 : 250 mg/mL (1286.87 mM; Need ultrasonic)
 Ethanol : 100 mg/mL (514.75 mM; Need ultrasonic)
 H₂O : 1 mg/mL (5.15 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	5.1475 mL	25.7374 mL	51.4748 mL
	5 mM	1.0295 mL	5.1475 mL	10.2950 mL
	10 mM	0.5147 mL	2.5737 mL	5.1475 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (12.87 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (12.87 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (12.87 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (10.71 mM); Clear solution
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BIOLOGICAL ACTIVITY

Description	Hexylresorcinol (4-Hexylresorcinol) is a natural compound found in plants with antimicrobial, anthelmintic, antiseptic and antitumor activities. Hexylresorcinol can induce apoptosis in squamous carcinoma cells. Hexylresorcinol is a reversible and noncompetitive inhibitor of α -glucosidase. Hexylresorcinol has protective effects against oxidative DNA damage ^{[1][2][3][4][5]} .																
IC₅₀ & Target	α -glucosidase ^[4]																
In Vitro	<p>Hexylresorcinol potently inhibits Gram positive bacteria, with MICs of 20-50 mg/L for several Gram positive bacteria. Gram negative bacteria, yeasts and fungi are less sensitive to it^[1].</p> <p>Hexylresorcinol inhibits oxidative DNA damage in human lymphocytes by increasing levels of glutathione and modulation of antioxidant enzymes (GPX, GR and GST)^[2].</p> <p>Hexylresorcinol (1-10 μg/mL; 24-72 hours) suppresses squamous carcinoma cell line SCC-9 proliferation^[3].</p> <p>Hexylresorcinol has strong antitumor effects by inhibiting calcium channel oscillation and inducing apoptosis^[3].</p> <p>Hexylresorcinol upregulates TGF-β/SMAD/VEGF signaling in endothelial cells and induces vascular regeneration and remodeling for wound healing^[5].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay^[3]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>SCC-9 cells</td> </tr> <tr> <td>Concentration:</td> <td>1 μg/mL, 5 μg/mL, 10 μg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours, 48 hours, 72 hours</td> </tr> <tr> <td>Result:</td> <td>Inhibited SCC-9 cells proliferation.</td> </tr> </table> <p>Apoptosis Analysis^[3]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>SCC-9 cells</td> </tr> <tr> <td>Concentration:</td> <td>10 μg/mL</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Induced morphological and biochemical changes in SCC-9 cells.</td> </tr> </table>	Cell Line:	SCC-9 cells	Concentration:	1 μ g/mL, 5 μ g/mL, 10 μ g/mL	Incubation Time:	24 hours, 48 hours, 72 hours	Result:	Inhibited SCC-9 cells proliferation.	Cell Line:	SCC-9 cells	Concentration:	10 μ g/mL	Incubation Time:	24 hours	Result:	Induced morphological and biochemical changes in SCC-9 cells.
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In Vivo	<p>Hexylresorcinol (10 mg/kg; i.p.; daily; for 16 days) inhibits tumor cell proliferation in mouse tumor xenografts and concomitant application of calcium channel blocker partly reverses the antitumor effect of Hexylresorcinol^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Male nude mice (BALB/cAnNCrj-nu/nu), with SCC-9 cells xenograft^[3]</td> </tr> <tr> <td>Dosage:</td> <td>10 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection, daily, for 16 days</td> </tr> <tr> <td>Result:</td> <td>Reduced tumor formation in vivo.</td> </tr> </table>	Animal Model:	Male nude mice (BALB/cAnNCrj-nu/nu), with SCC-9 cells xenograft ^[3]	Dosage:	10 mg/kg	Administration:	Intraperitoneal injection, daily, for 16 days	Result:	Reduced tumor formation in vivo.								
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REFERENCES

- [1]. Y. A. Nikolaev, et al. The use of 4-Hexylresorcinol as antibiotic adjuvant. PLoS One. 2020; 15(9): e0239147.
- [2]. Seong-Gon Kim, et al. 4-hexylresorcinol exerts antitumor effects via suppression of calcium oscillation and its antitumor effects are inhibited by calcium channel blockers. Oncol Rep. 2013 May;29(5):1835-40.
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