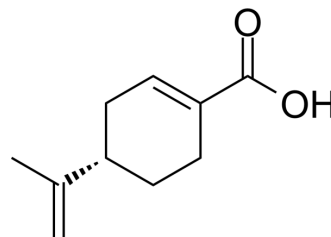


(S)-(-)-Perillic acid

Cat. No.:	HY-113471A
CAS No.:	23635-14-5
Molecular Formula:	C ₁₀ H ₁₄ O ₂
Molecular Weight:	166.22
Target:	Apoptosis; Bacterial
Pathway:	Apoptosis; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	(S)-(-)-Perillic acid is a terpenoid plant extract with antimicrobial and anticancer activities. (S)-(-)-Perillic acid induces cell apoptosis and cell cycle arrest, and increases the level of Bax, Bcl2, p21 and caspase-3 proteins. (S)-(-)-Perillic acid can be used for cancer and infection research ^{[1][2][3]} .								
In Vitro	<p>(S)-(-)-Perillic acid (1.0-3.5 mM; 24, 48 and 72 hours) time- and dose-dependently inhibits the growth of arterial smooth muscle cells (SMCs)^[1].</p> <p>(S)-(-)-Perillic acid (1.0-3.5 mM; 20 hours) dose-dependently inhibits the nuclear incorporation of thymidine by rat SMC^[1].</p> <p>(S)-(-)-Perillic acid (2.5 mM; 24 hours) blocks cell cycle progression in G0/G1 interphase and induces apoptosis of SMCs^[1].</p> <p>(S)-(-)-Perillic acid (1.0-3.5 mM; 20 hours) dose-dependently inhibits [³H]FOH and [³H]GGOH incorporation into specific low molecular weight proteins^[1].</p> <p>(S)-(-)-Perillic acid (0.5 mM; 24 h) increases Bax, Bcl2, p21, and caspase-3 proteins in H520 cells^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Human lung cancer A549 cell line</td> </tr> <tr> <td>Concentration:</td> <td>0-5 mM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hour</td> </tr> <tr> <td>Result:</td> <td>Inhibited long-term proliferation of A549 cells with an IC₅₀ value of 3.6 mM.</td> </tr> </table>	Cell Line:	Human lung cancer A549 cell line	Concentration:	0-5 mM	Incubation Time:	24 hour	Result:	Inhibited long-term proliferation of A549 cells with an IC ₅₀ value of 3.6 mM.
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Concentration:	0-5 mM								
Incubation Time:	24 hour								
Result:	Inhibited long-term proliferation of A549 cells with an IC ₅₀ value of 3.6 mM.								

REFERENCES

- [1]. Ferri N, et al. Effect of S(-) perillic acid on protein prenylation and arterial smooth muscle cell proliferation. *Biochem Pharmacol.* 2001 Dec 15;62(12):1637-45.
- [2]. Yeruva L, et al. Perillyl alcohol and perillic acid induced cell cycle arrest and apoptosis in non small cell lung cancer cells. *Cancer Lett.* 2007 Nov 18;257(2):216-26.
- [3]. Khandelia H, et al. Interaction of salicylate and a terpenoid plant extract with model membranes: reconciling experiments and simulations. *Biophys J.* 2010 Dec 15;99(12):3887-94.

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

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