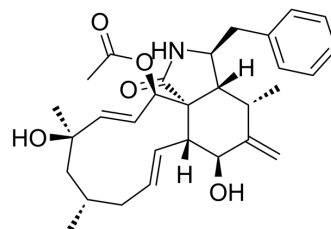


Cytochalasin H

Cat. No.:	HY-129325
CAS No.:	53760-19-3
Molecular Formula:	C ₃₀ H ₃₉ NO ₅
Molecular Weight:	493.63
Target:	Antibiotic; Bacterial; Apoptosis; Bcl-2 Family; Caspase
Pathway:	Anti-infection; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	<p>Cytochalasin H is a nature product that could be isolated from fungus <i>Phomopsis</i> sp. Cytochalasin H inhibits cell growth and induces apoptosis. Cytochalasin H has anti-angiogenic activity. Cytochalasin H is an antibiotic and has antibacterial activity [1][2][3].</p>																				
In Vitro	<p>Cytochalasin H (24-72 h) inhibits the proliferation of A549 cells with an IC₅₀ value of 159.5 μM^[1]. Cytochalasin H (0-50 μM; 48 h) induces apoptosis, arrests cell cycle at the G2/M phase and affects expression of apoptosis-related proteins in A549 cells^[1]. Cytochalasin H (1-512 μg/mL) has antibacterial activity against MDR entero-pathogenic bacteria, Gram-positive bacterium, <i>Staphylococcus aureus</i>^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Apoptosis Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>A549 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 6.25, 12.5, 25 and 50 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> <tr> <td>Result:</td> <td>Induced apoptosis in a dose-dependent manner in the A549 cells.</td> </tr> </table> <p>Cell Cycle Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>A549 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 6.25, 12.5, 25 and 50 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> <tr> <td>Result:</td> <td>Arrested cell cycle at the G2/M phase and sub-G1 peaks.</td> </tr> </table> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>A549 cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 6.25, 12.5, 25 and 50 μM</td> </tr> </table>	Cell Line:	A549 cells	Concentration:	0, 6.25, 12.5, 25 and 50 μM	Incubation Time:	48 h	Result:	Induced apoptosis in a dose-dependent manner in the A549 cells.	Cell Line:	A549 cells	Concentration:	0, 6.25, 12.5, 25 and 50 μM	Incubation Time:	48 h	Result:	Arrested cell cycle at the G2/M phase and sub-G1 peaks.	Cell Line:	A549 cells	Concentration:	0, 6.25, 12.5, 25 and 50 μM
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	Incubation Time:	48 h
	Result:	Increased the protein expression levels of Bax, P53 and cleaved caspase-3 and decreased the protein expression levels of Bcl-xL, Bcl-2 and full-length caspase-3.
In Vivo	Cytochalasin H (2.5 mg/kg; i.p.) can delay the growth of A549 xenograft tumors in Balb/c ^{nu/nu} mice ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	male Balb/c ^{nu/nu} mice with A549 xenograft ^[2]
	Dosage:	2.5 mg/kg
	Administration:	intraperitoneal injection; 3 injections/week, for 80 days
	Result:	Attenuated tumor growth in vivo.

REFERENCES

- [1]. Ma Y, et, al. Cytochalasin H isolated from mangrove-derived endophytic fungus induces apoptosis and inhibits migration in lung cancer cells. *Oncol Rep.* 2018 Jun;39(6):2899-2905.
- [2]. Yi JM, et, al. In Vivo Anti-tumor Effects of the Ethanol Extract of *Gleditsia sinensis* Thorns and Its Active Constituent, Cytochalasin H. *Biol Pharm Bull.* 2015;38(6):909-12.
- [3]. Jouda JB, et, al. Antibacterial and cytotoxic cytochalasins from the endophytic fungus *Phomopsis* sp. harbored in *Garcinia kola* (Heckel) nut. *BMC Complement Altern Med.* 2016 Nov 14;16(1):462.

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

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