

Microcystin-RR

Cat. No.:	HY-P0217
CAS No.:	111755-37-4
Molecular Formula:	C ₄₉ H ₇₅ N ₁₃ O ₁₂
Molecular Weight:	1038
Target:	Phosphatase; Apoptosis
Pathway:	Metabolic Enzyme/Protease; Apoptosis
Storage:	Sealed storage, away from moisture and light
	Powder -80°C 2 years
	-20°C 1 year
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)

BIOLOGICAL ACTIVITY

Description	Microcystin-RR (Cyanoviridin RR) is a potent and orally active protein phosphatase inhibitor. Microcystin-RR induces Apoptosis and ER stress in mice liver ^{[1][2]} .								
In Vivo	<p>Microcystin-RR (0, 4..6, 23, 46, 93, 186 µg/mL; gavage; daily for 7 days) induces apoptosis and increases the expression of Bax,p53, decreases the expression of Bcl-2 in a dose-dependent manner in mice liver^[2]. 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>20-22 g, male ICR mice^[2]</td> </tr> <tr> <td>Dosage:</td> <td>0, 4..6, 23, 46, 93, 186 µg/mL</td> </tr> <tr> <td>Administration:</td> <td>Gavage; daily for 7 days</td> </tr> <tr> <td>Result:</td> <td>Induced obvious apoptosis in mice liver with the percentage of apoptotic cells were 10.46, 12.6, 12.7, 13.3, 28.5, and 37.5% for 0, 4..6, 23, 46, 93, 186 µg/mL, respectively; increased the expression of Bax,p53, decreased the expression of Bcl-2 in a dose-dependent manner in mice liver.</td> </tr> </table>	Animal Model:	20-22 g, male ICR mice ^[2]	Dosage:	0, 4..6, 23, 46, 93, 186 µg/mL	Administration:	Gavage; daily for 7 days	Result:	Induced obvious apoptosis in mice liver with the percentage of apoptotic cells were 10.46, 12.6, 12.7, 13.3, 28.5, and 37.5% for 0, 4..6, 23, 46, 93, 186 µg/mL, respectively; increased the expression of Bax,p53, decreased the expression of Bcl-2 in a dose-dependent manner in mice liver.
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REFERENCES

[1]. Matsushima R, et al. In vitro and in vivo effects of protein phosphatase inhibitors, microcystins and nodularin, on mouse skin and fibroblasts. Biochem Biophys Res Commun. 1990 Sep 14;171(2):867-74.

[2]. Huang P, et al. The apoptotic effect of oral administration of microcystin-RR on mice liver. Environ Toxicol. 2011 Oct;26(5):443-52.

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

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