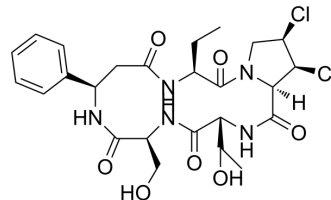


## Astin B

<b>Cat. No.:</b>	HY-P3148
<b>CAS No.:</b>	151201-76-2
<b>Molecular Formula:</b>	C <sub>25</sub> H <sub>33</sub> Cl <sub>2</sub> N <sub>5</sub> O <sub>7</sub>
<b>Molecular Weight:</b>	586.46
<b>Target:</b>	Apoptosis; Autophagy; Reactive Oxygen Species; JNK; Bcl-2 Family; Caspase; p62; Atg8/LC3
<b>Pathway:</b>	Apoptosis; Autophagy; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κ B; MAPK/ERK Pathway
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Astin B is an orally active and potent cyclic pentapeptide, that can be isolated from <i>Aster tataricus</i> . Astin B has hepatotoxic effects <i>in vitro</i> and <i>in vivo</i> and that hepatic injury was primarily mediated by apoptosis in a mitochondria/caspase-dependent manner. Astin B induces autophagy in L-02 cells, increases LC3-II and decreases p62 expression <sup>[1]</sup> .											
<b>IC<sub>50</sub> &amp; Target</b>	Bcl-2	Bax	Caspase-3	Caspase-9								
<b>In Vitro</b>	<p>Astin B (0-60 μM, 12-48 h) inhibits proliferation of L-02 cells<sup>[1]</sup>.</p> <p>Astin B (0-60 μM, 24 h) induces oxidative stress and mitochondrial dysfunction, regulates Bcl-2/Bax expression and increases caspase-3 and -9 activity<sup>[1]</sup>.</p> <p>Astin B (0-60 μM, 24 h) induces autophagy in L-02 cells to protect from apoptosis<sup>[1]</sup>.</p> <p>Astin B provokes oxidative stress-associated inflammation in hepatocytes as evidenced by increased levels of reactive oxygen species (ROS), reduced contents of intracellular glutathione (GSH), and enhanced phosphorylation of c-Jun N-terminal kinase (JNK)<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>											
<b>In Vivo</b>	<p>Astin B (10 mg/kg, Orally, once daily for 7 consecutive days) induces liver injury in mice<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>Male ICR mice (6–8 weeks of age, 10 per group)<sup>[1]</sup></td> </tr> <tr> <td>Dosage:</td> <td>10 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Orally administered, once daily for 7 consecutive days</td> </tr> <tr> <td>Result:</td> <td>Induced liver injury in mice. Compared to the control group, the serum levels of ALT and AST in mice treated with astin B were elevated about 11.9 and 2.26 times, respectively.</td> </tr> </table>				Animal Model:	Male ICR mice (6–8 weeks of age, 10 per group) <sup>[1]</sup>	Dosage:	10 mg/kg	Administration:	Orally administered, once daily for 7 consecutive days	Result:	Induced liver injury in mice. Compared to the control group, the serum levels of ALT and AST in mice treated with astin B were elevated about 11.9 and 2.26 times, respectively.
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### REFERENCES

[1]. Wang L, et al. Astin B, a cyclic pentapeptide from *Aster tataricus*, induces apoptosis and autophagy in human hepatic L-02 cells. *Chem Biol Interact.* 2014 Nov 5;223:1-9.

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

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