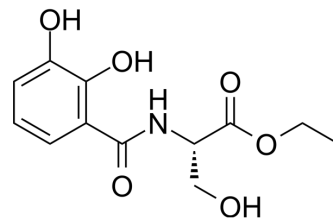


## Axinelline A

Cat. No.:	HY-N11624
CAS No.:	1593741-99-1
Molecular Formula:	C <sub>12</sub> H <sub>15</sub> NO <sub>6</sub>
Molecular Weight:	269.25
Target:	COX
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Axinelline A is a potent COX inhibitor with IC <sub>50</sub> s of 2.22 μM and 8.89 μM against COX-2 and COX-1, respectively. Axinelline A shows anti-inflammatory activity <sup>[1]</sup> .									
<b>IC<sub>50</sub> &amp; Target</b>	COX-2 2.22 μM (IC <sub>50</sub> )	COX-1 8.89 μM (IC <sub>50</sub> )								
<b>In Vitro</b>	<p>Axinelline A (2-30 μM; 24 h) inhibits Lipopolysaccharide (LPS; HY-D1056)-induced expression of pro-inflammatory factors (NO, TNF-α, IL-6, IL-1β, and PGE<sub>2</sub>) in RAW264.7 cells<sup>[1]</sup>.</p> <p>Axinelline A (2-30 μM; 24 h) inhibits LPS-induced NF-κB signaling pathway in RAW264.7 cells<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>RAW264.7 cells</td> </tr> <tr> <td>Concentration:</td> <td>2, 10 and 30 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Diminished LPS-induced expression of nitric oxide synthase (iNOS) and COX-2 protein levels. The phosphorylation level of NF-κB increased after 30 min of LPS treatment, but pretreatment with test compound reduced the level of phosphorylation in a dose-dependent manner. The phosphorylation of IKK and IκBα was inhibited in a dose-dependent manner.</td> </tr> </table>		Cell Line:	RAW264.7 cells	Concentration:	2, 10 and 30 μM	Incubation Time:	24 h	Result:	Diminished LPS-induced expression of nitric oxide synthase (iNOS) and COX-2 protein levels. The phosphorylation level of NF-κB increased after 30 min of LPS treatment, but pretreatment with test compound reduced the level of phosphorylation in a dose-dependent manner. The phosphorylation of IKK and IκBα was inhibited in a dose-dependent manner.
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### REFERENCES

[1]. Ju Z, et al. Synthesis and Anti-Inflammatory Activity of the Natural Cyclooxygenase-2 Inhibitor Axinelline A and Its Analogues. J Nat Prod. 2023 Apr 28;86(4):958-965.

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

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