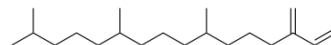


## Neophytadiene

Cat. No.:	HY-N8534
CAS No.:	504-96-1
Molecular Formula:	C <sub>20</sub> H <sub>38</sub>
Molecular Weight:	278.52
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Neophytadiene is a diterpene found in <i>Turbinaria ornata</i> , with anti-inflammatory antioxidant and cardioprotective properties <sup>[1]</sup> .	
<b>In Vitro</b>	<p>Neophytadiene has cytotoxic on RAW 264.7 cells with an IC<sub>50</sub> of 50 μM<sup>[1]</sup>.</p> <p>Neophytadiene (50-100 μM; 30 min) successfully inhibits the NO production level and downregulated inducible nitric oxide synthase (iNOS) production in LPS (1 μg/mL)-induced RAW264.7 cells<sup>[1]</sup>.</p> <p>Neophytadiene (25-100 μM; 22 hours) significantly inhibits the NO production and inflammatory cytokines TNF-α, IL-6 and IL-10 and IL-10 in LPS (1 μg/mL)-induced RAW264.7 cells<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>Neophytadiene (50 mg/kg; p.o.) shows dose-dependent reduction in the alanine aminotransferase (ALT) level<sup>[1]</sup>.</p> <p>Neophytadiene (25-50 mg/kg; p.o.) significantly reduces LPS (10 mg/kg)-increased IL6 and 1L10 levels and in heart tissue<sup>[1]</sup>.</p> <p>Neophytadiene (25-50 mg/kg; p.o.) significantly reduces LPS (10 mg/kg)-increased PGE2mRNA expression in heart tissue<sup>[1]</sup>.</p> <p>Neophytadiene significantly inhibits LPS (10 mg/kg)-induced NO production and inflammatory cytokines TNF-α, IL-6 and IL-10 and IL-10 in vivo<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
	Animal Model:	Adult male Sprague Dawley rats (6-8 weeks) <sup>[1]</sup>
	Dosage:	12 mg/kg, 25 mg/kg, 50 mg/kg
	Administration:	Oral administration, daily, for 7 days
	Result:	Decreased haemoglobin (HGB) level, ALT level, and heart tissue TNF-α, IL1β, NF-κB, iNOS, PI3k/AktandMAPK in LPS (10 mg/kg)-treat rats.

### REFERENCES

[1]. Meenakshi Bhardwaj, et al. Neophytadiene from *Turbinaria ornata* Suppresses LPS-Induced Inflammatory Response in RAW 264.7 Macrophages and Sprague Dawley Rats. *Inflammation*. 2020 Jun;43(3):937-950.

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

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