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Produktinformation



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Diagnostik & molekulare Diagnostik



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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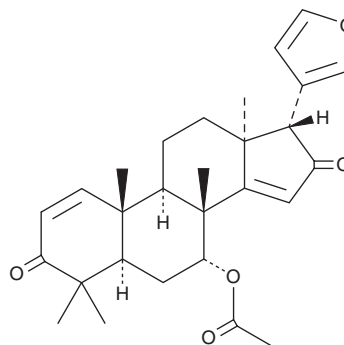
PRODUCT INFORMATION



Azadiradione

Item No. 37063

CAS Registry No.: 26241-51-0
Formal Name: (5a,7a,13a,17a)-7-(acetyloxy)-21,23-epoxy-4,4,8-trimethyl-24-norchola-1,14,20,22-tetraene-3,16-dione
MF: $C_{28}H_{34}O_5$
FW: 450.6
Purity: $\geq 98\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Azadiradione is supplied as a solid. A stock solution may be made by dissolving the azadiradione in the solvent of choice, which should be purged with an inert gas. Azadiradione is sparingly soluble (1-10 mg/ml) in chloroform and slightly soluble (0.1-1 mg/ml) in methanol.

Description

Azadiradione is a limonoid that has been found in *A. indica* and has diverse biological activities.¹⁻⁵ It inhibits heparin-induced tau aggregation by 54.2% in a cell-free assay when used at a concentration of 400 μM .¹ Azadiradione inhibits the tautomerase activity of human, *P. falciparum*, and *P. yoelii* migration inhibitory factor (MIF; $\text{IC}_{50}\text{s} = 35.2, 45.6, \text{ and } 43 \mu\text{M}$, respectively).² It is cytotoxic to HL-60 leukemia and SK-BR-3 breast cancer cells ($\text{IC}_{50}\text{s} = 14.7 \text{ and } 15.9 \mu\text{M}$, respectively) but not A549 lung, AZ-521 stomach, or CRL-1579 melanoma cells ($\text{IC}_{50}\text{s} = >20 \mu\text{M}$ for all).³ Azadiradione (10 mg/kg) decreases the mutant huntingtin aggregate load in the cortex, striatum, and hippocampus, improves motor function, and increases lifespan in the R6/2 transgenic mouse model of Huntington's disease.⁴ It increases the levels of heat shock factor 1 (Hsf1), heat shock protein 70 (Hsp70), and ubiquitin-protein ligase E3A (Ube3a) in the mouse cortex and striatum in the same model. Azadiradione (10 mg/kg) also reduces blood glucose levels and α -amylase activity, as well as serum triglyceride and HDL levels, in a rat model of diabetes induced by streptozotocin (Item No. 13104).⁵

References

1. Gorantla, N.V., Das, R., Chidambaram, H., *et al.* Basic limonoid modulates chaperone-mediated proteostasis and dissolve Tau fibrils. *Sci. Rep.* **10**(1), 4023 (2020).
2. Alam, A., Haldar, S., Thulasiram, H.V., *et al.* Novel anti-inflammatory activity of epoxyazadiradione against macrophage migration inhibitory factor: Inhibition of tautomerase and proinflammatory activities of macrophage migration inhibitory factor. *J. Biol. Chem.* **287**(29), 24844-24861 (2012).
3. Kikuchi, T., Ishii, K., Noto, T., *et al.* Cytotoxic and apoptosis-inducing activities of limonoids from the seeds of *Azadirachta indica* (neem). *J. Nat. Prod.* **74**(4), 866-870 (2011).
4. Singh, B.K., Vatsa, N., Nelson, V.K., *et al.* Azadiradione restores protein quality control and ameliorates the disease pathogenesis in a mouse model of Huntington's disease. *Mol. Neurobiol.* **55**(8), 6337-6346 (2018).
5. Ramkumar, S., Thulasiram, H.V., and RaviKumar, A. Improvement in serum amylase and glucose levels in diabetic rats on oral administration of bisdemethoxycurcumin from *Curcuma longa* and limonoids from *Azadirachta indica*. *J. Food Biochem.* **45**(4), e13674 (2021).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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