

# PRODUCT INFORMATION



## Azadirachtin B

Item No. 29569

**CAS Registry No.:** 106500-25-8  
**Formal Name:** (2aR,3S,4S,4aR,5S,7aS,8S,10R,10aS,10bR)-octahydro-3,8-dihydroxy-4-methyl-10-[[[(2E)-2-methyl-1-oxo-2-buten-1-yl]oxy]-4-[(1aR,2S,3aS,6aS,7S,7aS)-3a,6a,7,7a-tetrahydro-6a-hydroxy-7a-methyl-2,7-methanofuro[2,3-b]oxireno[e]oxepin-1a(2H)-yl]-7H,8H-furo[3',4':4,4a]naphtho[1,8-bc]furan-5,10a(1H)-dicarboxylic acid, 5,10a-dimethyl ester

**Synonyms:** Deacetylazadirachtinol, 3-Tigloylazadirachtol

**MF:** C<sub>33</sub>H<sub>42</sub>O<sub>14</sub>

**FW:** 662.7

**Purity:** ≥95%

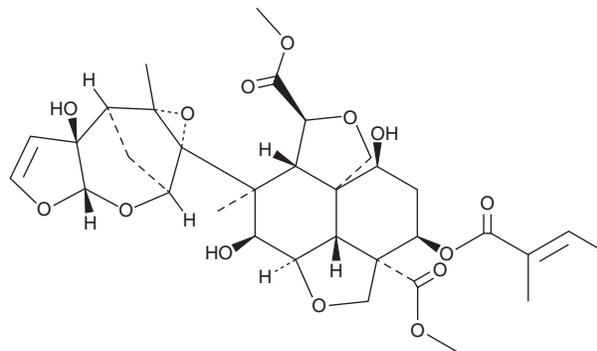
**Supplied as:** A solid

**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

Azadirachtin B is supplied as a solid. A stock solution may be made by dissolving the azadirachtin B in the solvent of choice, which should be purged with an inert gas. Azadirachtin B is slightly soluble in chloroform, DMSO, and methanol.

### Description

Azadirachtin B is an azadirachtin that has been found in the neem tree, *A. indica*, and has diverse biological activities, including insecticidal, nematocidal, anticancer, and osteogenic properties.<sup>1-5</sup> It has antifeedant activity against *P. xylostella* third instar larvae when used at a concentration of 3 mg/ml and induces mortality with an LC<sub>50</sub> of 1.03 mg/ml.<sup>2</sup> It induces mortality in *M. incognita* second instar larvae with an LD<sub>50</sub> value of 125.8 ppm.<sup>3</sup> Azadirachtin B (780 nmol in the drinking water) reduces the number of papillomas formed on mouse skin in a model of skin carcinogenesis induced by peroxyxynitrite and phorbol 12-myristate 13-acetate (TPA; Item No. 10008014) but is not cytotoxic to HL-60, A549, AZ521, SK-BR-3, or CRL1579 cancer cells (IC<sub>50</sub>s = >20 μM for all).<sup>4,5</sup> It induces osteoblast differentiation and increases the rate of osteoblast proliferation in primary calvarial osteoblast cells when used at concentrations of 100 pM and 10 nM but not 1 pM, 1 μM, or 100 μM.<sup>1</sup>

### References

1. Kushwaha, P.K., Khedgikar, V., Haldar, S., et al. *Bioorg. Med. Chem. Lett.* **26(15)**, 3719-3724 (2016).
2. Zhang, Z., Cheng, D., and Xu, H. *Zhiwu Baohu* **33(3)**, 80-82 (2007).
3. Sinha, S., Chakraborty, U., Mishra, S.D., et al. *Indian J. Nemat.* **35(2)**, 183-186 (2005).
4. Akihisa, T., Noto, T., Takahashi, A., et al. *J. Oleo. Sci.* **58(11)**, 581-594 (2009).
5. Kikuchi, T., Ishii, K., Noto, T., et al. *J. Nat. Prod.* **74(4)**, 866-870 (2011).

#### 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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