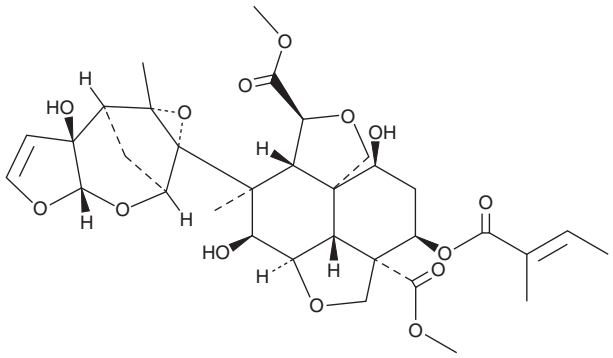
PRODUCT INFORMATION

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: $C_{33}H_{42}O_{14}$
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.[1-5] 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_{50} of 1.03 mg/ml.[2] It induces mortality in *M. incognita* second instar larvae with an LD_{50} value of 125.8 ppm.[3] 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 peroxynitrite 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_{50}s = >20 µM for all).[4,5] 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.[1]

References

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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).

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