

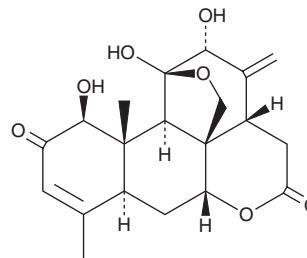
PRODUCT INFORMATION



Ailanthone

Item No. 29194

CAS Registry No.: 981-15-7
Formal Name: (1 β ,11 β ,12 α)-11,20-epoxy-1,11,12-trihydroxy-picrasa-3,13(21)-diene-2,16-dione
Synonym: Δ^{13} -Dehydrochaparrinone
MF: C₂₀H₂₄O₇
FW: 376.4
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 238 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Plant/*Ailanthus altissima*



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

Laboratory Procedures

Ailanthone is supplied as a crystalline solid. A stock solution may be made by dissolving the ailanthone in the solvent of choice, which should be purged with an inert gas. Ailanthone is soluble in the organic solvent DMSO.

Description

Ailanthone is a quassinoid that has been found in *Ailanthus* and has diverse biological activities.¹⁻³ It is active against the *P. falciparum* strains HB-3 and Dd-2 *in vitro* (IC₅₀s = 0.003 and 0.037 $\mu\text{g/ml}$, respectively).¹ Ailanthone is phytotoxic, inhibiting radish seed germination by 88% when used at a concentration of 1 mM.² It inhibits dihydrotestosterone-induced androgen receptor transcriptional activity (IC₅₀ = 69 nM in a reporter assay), as well as the growth and colony formation of LNCaP and 22RV1 androgen receptor-expressing cells, but not androgen receptor-negative PC3 and DU145 cells, when used at a concentration of 0.1 μM .³ Ailanthone (2 mg/kg) reduces tumor volume in 22Rv1, LNCaP, and VCaP castration-resistant prostate cancer (CRPC) mouse xenograft models.

References

1. Okunade, A.L., Bikoff, R.E., Casper, S.J., *et al.* Antiplasmodial activity of extracts and quassinoids isolated from seedlings of *Ailanthus altissima* (Simaroubaceae). *Phytother. Res.* **17**(6), 675-677 (2003).
2. De Feo, V., De Martino, L., Quaranta, E., *et al.* Isolation of phytotoxic compounds from tree-of-heaven (*Ailanthus altissima* swingle). *J. Agric. Food Chem.* **51**(5), 1177-1180 (2003).
3. He, Y., Peng, S., Wang, J., *et al.* Ailanthone targets p23 to overcome MDV3100 resistance in castration-resistant prostate cancer. *Nat. Commun.* **7**:13122, (2016).

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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