

Product Data Sheet

Product Name: Artepillin C

Cat. No.: GC91675

Chemical Properties

Cas. No. 72944-19-5

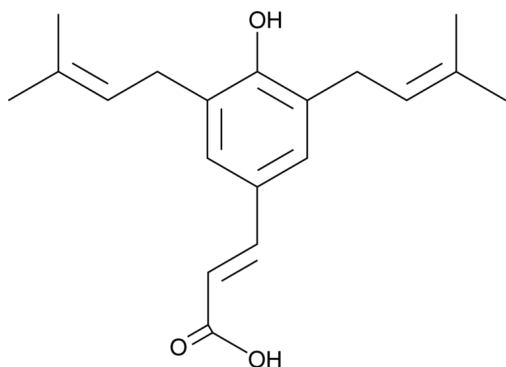
Formula $C_{19}H_{24}O_3$ M.Wt 300.4

Solubility Acetonitrile: Soluble, DMSO: Soluble Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Artepillin C is a prenylated cinnamic acid that has been found in *B. grisebachii* and has diverse biological activities.^{1,2,3,4,5,6} It selectively inhibits aldo-keto reductase 1C3 (AKR1C3; $\text{IC}_{50} = 1\text{ }\mu\text{M}$), also known as prostaglandin F synthase, over AKR1C1, AKR1C2, and AKR1C4 at $100\text{ }\mu\text{M}$.^[1] It also inhibits lipid peroxidation in isolated human erythrocytes.^[2] Artepillin C ($10\text{ }\mu\text{M}$) induces calcium influx in HEK293T cells expressing human transient receptor potential ankyrin 1 (TRPA1), an effect that can be blocked by the TRPA1 inhibitor HC-030031.^[3] It is cytotoxic to HT-1080 fibrosarcoma and 26-L5 colon cancer cells ($\text{IC}_{50}\text{s} = 45.47$ and $59.32\text{ }\mu\text{g/ml}$, respectively).^[4] Artepillin C is active against *C. albicans*, *E. floccosum*, *T. rubrum*, methicillin-sensitive *S. aureus*, and methicillin-resistant *S. aureus* (MRSA; MICs = 250, 50, 125, 250, and $250\text{ }\mu\text{g/ml}$, respectively).^[5] *In vivo*, artepillin C (1

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

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and 10 mg/kg) decreases carrageenan-induced peritoneal leukocyte infiltration in mice.[6]

References:

- [1].Endo, S., Matsunaga, T., Kanamori, A., et al.Selective inhibition of human type-5 17β -hydroxysteroid dehydrogenase (AKR1C3) by baccharin, a component of Brazilian propolisJ. Nat. Prod.75(4)716-721(2012).
- [2].Tapia, A., Rodriguez, J., Theoduloz, C., et al.Free radical scavengers and antioxidants from Baccharis grisebachiiJ. Ethnopharmacol.95(2-3)155-161(2004).
- [3].Hata, T., Tazawa, S., Ohta, S., et al.Artepillin C, a major ingredient of Brazilian propolis, induces a pungent taste by activating TRPA1 channelsPLoS One7(11)e48072(2012).
- [4].Banskota, A.H., Tezuka, Y., Prasain, J.K., et al.Chemical constituents of brazilian propolis and their cytotoxic activitiesJ. Nat. Prod.61(7)896-900(1998).
- [5].Feresin, G.E., Tapia, A., Gimenez, A., et al.Constituents of the Argentinian medicinal plant Baccharis grisebachii and their antimicrobial activityJ. Ethnopharmacol.89(1)73-80(2003).
- [6].Paulino, N., Abreu, S.R., Uto, Y., et al.Anti-inflammatory effects of a bioavailable compound, Artepillin C, in Brazilian propolisEur. J. Pharmacol.587(1-3)296-301(2008).

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