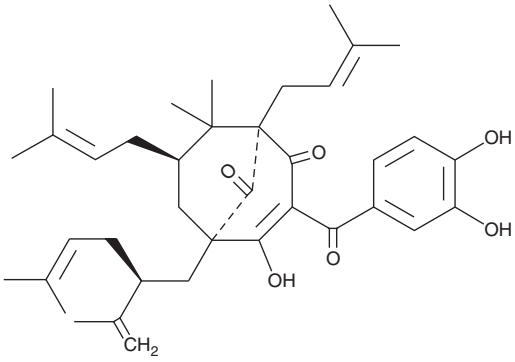
PRODUCT INFORMATION

Garcinol

Item No. 10566

CAS Registry No.: 78824-30-3
Formal Name: (1R,5R,7R)-3-(3,4-dihydroxybenzoyl)-4-hydroxy-8,8-dimethyl-1,7-bis(3-methyl-2-buten-1-yl)-5-[(2S)-5-methyl-2-(1-methylethenyl)-4-hexen-1-yl]-bicyclo[3.3.1]non-3-ene-2,9-dione
Synonyms: Camboginol, Guttiferone F
MF: $C_{38}H_{50}O_6$
FW: 602.8
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years
Item Origin: Plant/*Garcinia indica*



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

Laboratory Procedures

Garcinol is supplied as a crystalline solid. A stock solution may be made by dissolving the garcinol in the solvent of choice, which should be purged with an inert gas. Garcinol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of garcinol in ethanol is approximately 20 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Garcinol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, garcinol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Garcinol has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Garcinol is a polyisoprenylated benzophenone that has been found in *G. indica* and has diverse biological activities.[1-5] It inhibits the histone acetyltransferases (HATs) p300 and p300/CREB-binding protein-associated factor (PCAF; IC_{50}s = ~7 and ~5 µM, respectively), as well as COX-1, microsomal prostaglandin E_2 (PGE_2) synthase-1 (mPGES-1) and 5-lipoxygenase (5-LO; IC_{50}s = 12, 0.1, and 0.3 µM, respectively).[1,2] Garcinol (0.8 µM) is active against the fungus *C. neoformans in vitro*.[3] It scavenges hydroxyl radicals and superoxide anions in cell-free assays.[4] Garcinol (5 µM) induces neurite outgrowth of primary embryonic rat neural progenitor cells.[5] It reduces ulcer area in rat models of gastric ulcers induced by water immersion stress or indomethacin (Item No. 70270) when administered at a dose of 200 mg/kg.[4]

References

1. Balasubramanyam, K., Altaf, M., Varier, R.A., *et al. J. Biol. Chem.* **279(32)**, 33716-33726 (2004).
2. Koeberle, A., Northoff, H., and Werz, O. *Biochem. Pharmacol.* **77(9)**, 1513-1521 (2009).
3. O'Meara, T.R., Hay, C., Price, M.S., *et al. Eukaryot. Cell* **9(8)**, 1193-1202 (2010).
4. Yamaguchi, F., Saito, M., Ariga, T., *et al. J. Agric. Food Chem.* **48(6)**, 2320-2325 (2000).
5. Weng, M.-S., Liao, C.-H., Yu, S.-Y., *et al. J. Agric. Food Chem.* **59(3)**, 1031-1040 (2011).

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