Garcinol, a polyisoprenylated benzophenone isolated from Garcinia indica, is an inhibitor of the histone acetyltransferases (HATs) p300 and pCAF (IC\(_{50}\) = 7 and 5 \(\mu\)M, respectively; Balasubramanyam et al.). It also inhibits the HAT Gcn5 in Cryptococcus neoformans, inducing temperature sensitivity and impairing growth (O’Meara et al.).

**Structure:**

![Garcinol Structure](image)

**Chemical Name:**
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

**Molecular Name:** Garcinol

**CAS Number:** 78824-30-3

**Chemical Formula:** \(C_{38}H_{59}O_6\)

**Molecular Weight:** 602.8 g/mol

**Purity:** ≥ 95%

**Chemical Description:**

A crystalline solid

**Storage:**
Product stable at -20°C as supplied. Protect from prolonged exposure to light.

Stable as supplied for 12 months from date of receipt.

**Solubility:**
- Absolute ethanol ≤ 30 mM
- DMSO ≤ 30 mM

For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 166 \(\mu\)L of fresh DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.
Published Applications

MAINTENANCE AND SELF-RENEWAL
- Promotes ex vivo expansion of human hematopoietic stem cells (Nishino et al.).

DIFFERENTIATION
- Promotes neurogenesis in rat cortical progenitor cells (Weng et al.).

CANCER RESEARCH
- Induces apoptosis in several types of cancer cells and has anti-inflammatory actions (Koeberle et al.; Prasad et al.).

References


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