

# PRODUCT INFORMATION



## Isogarcinol

Item No. 21164

**CAS Registry No.:** 71117-97-0  
**Formal Name:** (3S,4aS,6R,8R)-10-(3,4-dihydroxybenzoyl)-3,4,5,6,7,8-hexahydro-2,2,7,7-tetramethyl-3,6,8-tris(3-methyl-2-buten-1-yl)-9H-4a,8-methano-2H-cycloocta[b]pyran-9,11-dione

**Synonym:** Cambogin

**MF:** C<sub>38</sub>H<sub>50</sub>O<sub>6</sub>

**FW:** 602.8

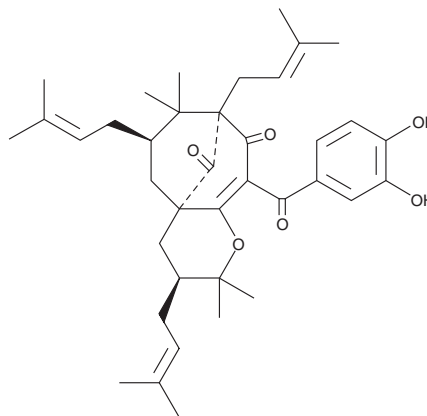
**Purity:** ≥95%

**UV/Vis.:** λ<sub>max</sub>: 228, 230, 276 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥2 years



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

### Laboratory Procedures

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

Isogarcinol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, isogarcinol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Isogarcinol 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

Isogarcinol is a natural polyisoprenylated benzophenone first isolated from plant species in the genus *garcinia*. It has immunosuppressant actions, inhibiting the protein phosphatase calcineurin (IC<sub>50</sub> = 36 μM) and suppressing the proliferation of T cells.<sup>1</sup> Oral administration of isogarcinol in mice decreases delayed type hypersensitivity, prolongs graft survival in allogeneic skin transplants, suppresses inflammation in collagen-induced arthritis, and reduces clinical symptoms in experimental autoimmune encephalomyelitis.<sup>1-3</sup> Isogarcinol inhibits the proliferation of HL-60 and PC-3 cancer cells (IC<sub>50</sub>s = 4 and 8 μg/ml, respectively) through cell cycle arrest and apoptosis.<sup>4</sup>

### References

1. Cen, J., Shi, M., Yang, Y., et al. Isogarcinol is a new immunosuppressant. *PLoS One* **8(6)**, e66503 (2013).
2. Fu, Y., Zhou, H., Wang, M., et al. *J. Agric. Immune regulation and anti-inflammatory effects of isogarcinol extracted from *garcinia mangostana* L. against collagen-induced arthritis. *Food Chem.* **62(18)**, 4127-4134 (2014).*
3. Wang, M., Xie, Y., Xhong, Y., et al. Amelioration of experimental autoimmune encephalomyelitis by isogarcinol extracted from *garcinia mangostana* L. *mangosteen. J. Agric. Food Chem.* **64(47)**, 9012-9021 (2016).
4. Pieme, C.A., Ambassa, P., Yankep, E., et al. Epigarcinol and isogarcinol isolated from the root of *garcinia ovalifolia* induce apoptosis of human promyelocytic leukemia (HL-60 cells). *BMC Res. Notes* **8**, 700 (2015).

#### 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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