

Product Information

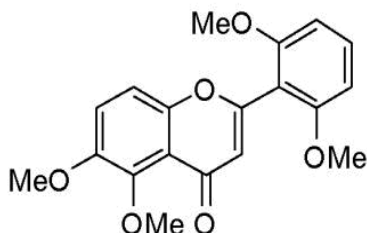
Zapotin from *Casimiroa edulis* (White Sapote tree)

Catalog Number **Z4652**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN : 14813-19-5

Synonyms: 2',5,6,6'-tetramethoxyflavone



Molecular Weight: 342.34

Molecular formula: $\text{C}_{19}\text{H}_{18}\text{O}_6$

Product Description

Zapotin is a tetramethoxyflavone which is found in leaves and seeds of the *Zapote blanco* tree.^{1,2} Zapotin is a non toxic inducer of cellular differentiation, apoptosis and cell cycle arrest.^{3,4} Hydroxylated flavonoids possess potent anti-invasive and anti-metastatic activities.^{1,4} Treatment with Zapotin markedly suppressed cell line proliferation and increased apoptosis in many colon cancer cell lines studied.¹ Zapotin was found to induce both cell differentiation and apoptosis in cultured human promyelocytic leukemia cells (HL-60 cells). In addition, the compound inhibits 12-O-tetradecanoylphorbol 13-acetate (TPA-c)-induced ornithine decarboxylase (ODC) activity in human bladder carcinoma cells (T24 cells). ODC is a rate-limiting enzyme for the biosynthesis of polyamines in mammalian cells. It is highly induced by growth factors and tumor promoters,⁴ and overexpressed in a variety of cancer cell lines. Zapotin inhibits also TPA-induced NF- κ B activity in human hepatocellular liver carcinoma cells (HepG2 cells). Thus, Zapotin has the potential to inhibit carcinogenesis and serve as a chemopreventive agent in various biological systems.^{3,4}

Purity: $\geq 98\%$ by HPLC

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store the product sealed at $-20\text{ }^{\circ}\text{C}$. Under these conditions the product is stable for at least 2 years. Soluble in DMSO, methanol, acetonitrile, and ethyl-acetate.

References

1. Murillo, G., et al., Zapotin, a phytochemical present in a Mexican fruit prevents colon carcinogenesis. *Nutrition and Cancer*, **57**, 28-37 (2007).
2. Dreyer, D.L., and Bertelli, D.J., The structure of Zapotin. *Tetrahedron*, **23**, 4607-4612 (1967).
3. Cuendet, M., et al., Zapotin prevents mouse skin tumorigenesis during the stage of initiation and promotion. *Anticancer Res.*, **28**, 3705-3710 (2008).
4. Maiti, A., et al., Synthesis and cancer chemopreventive activity of Zapotin, a natural product from *Casimiroa edulis*. *J. Med. Chem.*, **50**, 350-355 (2007).

DWF,KAA,PHC 10/10-1