

# PRODUCT INFORMATION



## Pomiferin

Item No. 35861

CAS Registry No.: 572-03-2

Formal Name: 3-(3,4-dihydroxyphenyl)-5-hydroxy-8,8-dimethyl-6-(3-methyl-2-buten-1-yl)-4H,8H-benzo[1,2-b:3,4-b']dipyran-4-one

Synonyms: 3'-Hydroxyosajin, NSC 5113

MF:  $C_{25}H_{24}O_6$

FW: 420.5

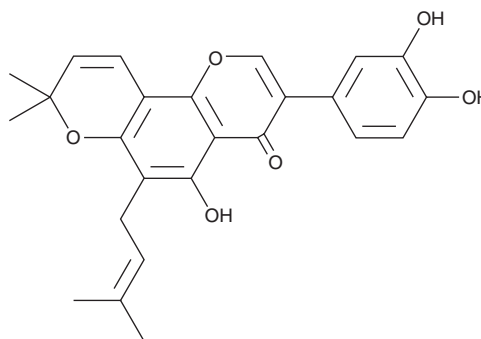
Purity:  $\geq 98\%$

Supplied as: A solid

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

Stability:  $\geq 4$  years

Item Origin: Plant/*Aurantii fructus immaturus*



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

### Laboratory Procedures

Pomiferin is supplied as a solid. A stock solution may be made by dissolving the pomiferin in the solvent of choice, which should be purged with an inert gas. Pomiferin is soluble in DMSO.

### Description

Pomiferin is a flavonoid that has been found in *M. pomifera* and has diverse biological activities.<sup>1-3</sup> It scavenges peroxynitrite and DPPH (Item No. 14805) radicals in cell-free assays when used at concentrations of 250 and 7  $\mu\text{M}$ , respectively, and inhibits Fe(II)/NADPH-induced lipid peroxidation in rat liver microsomes at 10  $\mu\text{M}$ .<sup>1</sup> Pomiferin is cytotoxic to HeLa, Hep3B, HepG2, H1299, MCF-7, and LNCaP cancer cells ( $\text{IC}_{50}\text{s} = 13.56\text{--}22.36 \mu\text{M}$ ) and induces the formation of autophagic puncta in HeLa cells when used at a concentration of 10  $\mu\text{M}$ .<sup>2</sup> *In vivo*, pomiferin (25 and 50 mg/kg) reduces tumor volume and the number of lung metastases in a murine Lewis lung carcinoma model. It also improves pulmonary function, increases survival, and decreases lung levels of TNF- $\alpha$  and IL-1 $\beta$  in a mouse model of LPS-induced acute respiratory distress syndrome (ARDS).<sup>3</sup>

### References

1. Veselá, D., Kubínová, R., Muselík, J., *et al.* Antioxidative and EROD activities of osajin and pomiferin. *Fitoterapia* **75**(2), 209-211 (2004).
2. Qu, Y.-Q., Song, L.-L., Xu, S.-W., *et al.* Pomiferin targets SERCA, mTOR, and P-gp to induce autophagic cell death in apoptosis-resistant cancer cells, and reverses the MDR phenotype in cisplatin-resistant tumors *in vivo*. *Pharmacol. Res.* **191**, 106769 (2023).
3. Tang, Z., Yang, Z., Feng, H., *et al.* Attenuation of the severity of acute respiratory distress syndrome by pomiferin through blocking inflammation and oxidative stress in an AKT/Foxo1 pathway-dependent manner. *Oxid. Med. Cell. Longev.* **5236908** (2022).

#### 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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