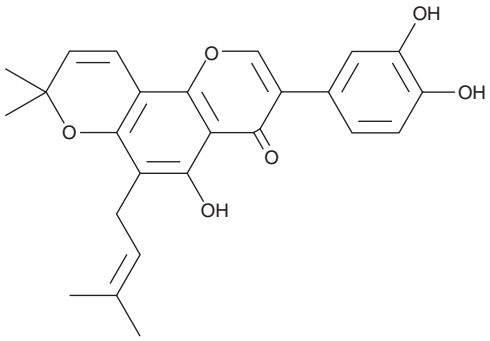
PRODUCT INFORMATION

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:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥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.[1-3] It scavenges peroxynitrite and DPPH (Item No. 14805) radicals in cell-free assays when used at concentrations of 250 and 7 µM, respectively, and inhibits Fe(II)/NADPH-induced lipid peroxidation in rat liver microsomes at 10 µM.[1] Pomiferin is cytotoxic to HeLa, Hep3B, HepG2, H1299, MCF-7, and LNCaP cancer cells (IC_{50}s = 13.56-22.36 µM) and induces the formation of autophagic puncta in HeLa cells when used at a concentration of 10 µM.[2] *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-α and IL-1β in a mouse model of LPS-induced acute respiratory distress syndrome (ARDS).[3]

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).

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