

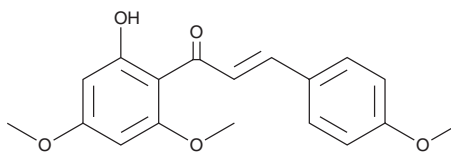
PRODUCT INFORMATION



Flavokawain A

Item No. 36083

CAS Registry No.:	37951-13-6
Formal Name:	(2E)-1-(2-hydroxy-4,6-dimethoxyphenyl)-3-(4-methoxyphenyl)-2-propen-1-one
Synonyms:	Flavokavain A, 4-methoxy Flavokawain B
MF:	C ₁₈ H ₁₈ O ₅
FW:	314.3
Purity:	≥98%
UV/Vis.:	λ _{max} : 361 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/ <i>Piper methysticum</i>



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

Laboratory Procedures

Flavokawain A is supplied as a solid. A stock solution may be made by dissolving the flavokawain A in the solvent of choice, which should be purged with an inert gas. Flavokawain A is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of flavokawain A in these solvents is approximately 2 and 5 mg/ml, respectively.

Description

Flavokawain A is a chalcone that has been found in *P. methysticum* and has diverse biological activities.¹⁻³ It activates nuclear factor erythroid 2-related factor 2 (Nrf2) and heat shock factor 1 (Hsf1; EC₅₀s = 14.1 and 7.9 μM, respectively, in reporter assays), increases glutathione (GSH) levels, and protects against hydrogen peroxide-induced cytotoxicity in HepG2 cells.¹ Flavokawain A (10 and 20 μM) inhibits LPS-induced increases in inducible nitric oxide synthase (iNOS), COX-2, nitric oxide (NO), and prostaglandin E₂ (PGE₂; Item No. 14010) levels in RAW 264.7 macrophages.² It induces apoptosis in T24 bladder cancer cells when used at a concentration of 12.5 μg/ml.³ Flavokawain A (50 mg/kg) reduces tumor growth in an EJ bladder cancer mouse xenograft model.

References

1. Pinner, K.D., Wales, C.T.K., Gristock, R.A., *et al.* Flavokawains A and B from kava (*Piper methysticum*) activate heat shock and antioxidant responses and protect against hydrogen peroxide-induced cell death in HepG2 hepatocytes. *Pharm. Biol.* **54(9)**, 1503-1512 (2016).
2. Kwon, D.-J., Ju, S.M., Youn, G.S., *et al.* Suppression of iNOS and COX-2 expression by flavokawain A via blockade of NF-κB and AP-1 activation in RAW 264.7 macrophages. *Food Chem. Toxicol.* **58**, 479-486 (2013).
3. Zi, X. and Simoneau, A.R. Flavokawain A, a novel chalcone from kava extract, induces apoptosis in bladder cancer cells by involvement of Bax protein-dependent and mitochondria-dependent apoptotic pathway and suppresses tumor growth in mice. *Cancer Res.* **65(8)**, 3479-3486 (2005).

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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