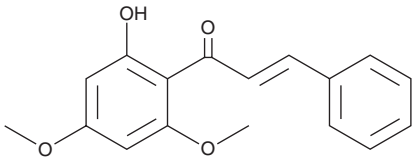
PRODUCT INFORMATION

Flavokawain B

Item No. 19652

CAS Registry No.: 1775-97-9
Formal Name: (2E)-1-(2-hydroxy-4,6-dimethoxyphenyl)-3-phenyl-2-propen-1-one
Synonym: Flavokavain B
MF: $C_{17}H_{16}O_4$
FW: 284.3
Purity: ≥98%
UV/Vis.: λ_{max}: 339 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Flavokawain B is supplied as a crystalline solid. A stock solution may be made by dissolving the flavokawain B in the solvent of choice, which should be purged with an inert gas. Flavokawain B is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of flavokawain B in these solvents is approximately 10, 50, and 30 mg/ml, respectively.

Description

Flavokawain B is a natural chalcone first isolated from extracts of kava roots. It induces apoptosis in androgen receptor-negative, hormone-refractory prostate cancer cell lines (IC_{50}s = 32, 48, 6.2, and 3.9 µM for LAPC4, LNCaP, PC-3, and DU145 cells, respectively, treated for 48 hours), with increased expression of the proapoptotic protein Bim.[1] Flavokawain B increases Bim expression and inhibits growth of DU145 xenografts in mice.[1] It also increases Bim expression, promotes apoptosis, and induces cell cycle arrest in uterine leiomyosarcoma cells.[2] However, flavokawain B is hepatotoxic, triggering oxidative stress, inhibiting NF-κB signaling, and activating MAPK pathways, culminating in HepG2 and L-02 cell death (LD_{50}s = 15 and 32 µM, respectively).[3]

References

1. Tang, Y., Xuesen, L., Zhongbo, L., *et al.* Flavokawain B, a kava chalcone, exhibits robust apoptotic mechanisms on androgen receptor-negative, hormone-refractory prostate cancer cell lines and reduces tumor growth in a preclinical model. *Int. J. Cancer* **127(8)**, 1758-1768 (2010).
2. Eskander, R.N., Randall, L.M., Sakai, T., *et al.* Flavokawain B, a novel, naturally occurring chalcone, exhibits robust apoptotic effects and induces G_2/M arrest of a uterine leiomyosarcoma cell line. *J. Obstet. Gynaecol. Res.* **38(8)**, 1086-1094 (2012).
3. Zhou, P., Gross, S., Liu, J.-H., *et al.* Flavokawain B, the hepatotoxic constituent from kava root, induces GSH-sensitive oxidative stress through modulation of IKK/NF-κB and MAPK signaling pathways. *FASEB J.* **24(12)**, 4722-4732 (2010).

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