

## Produktinformation



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Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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## SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien T. +43(0)1 489 3961-0 F. +43(0)1 489 3961-7 <u>mail@szabo-scandic.com</u> www.szabo-scandic.com

# **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- ОН propen-1-one
MF:	C <sub>17</sub> H <sub>16</sub> O <sub>4</sub>
FW:	284.3
Purity:	≥98%
UV/Vis.:	$\lambda_{max}$ : 339 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

#### 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. Flavokawain B is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of flavokawain B in these solvents is approximately 10, 50, and 30 mg/ml, respectively.

Flavokawain B is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

#### 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  $\mu$ M for LAPC4, LNCaP, PC-3, and DU145 cells, respectively, treated for 48 hours), with increased expression of the proapoptotic protein Bim.<sup>1</sup> Flavokawain B increases Bim expression and inhibits growth of DU145 xenografts in mice.<sup>1</sup> It also increases Bim expression, promotes apoptosis, and induces cell cycle arrest in uterine leiomyosarcoma cells.<sup>2</sup> 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<sub>50</sub>s = 15 and 32 μM, respectively).<sup>3</sup>

#### 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<sub>2</sub>/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).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFFTY DATA

al 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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1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA **PHONE:** [800] 364-9897 [734] 971-3335 FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM