

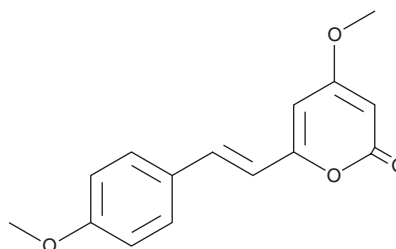
PRODUCT INFORMATION



Yangonin

Item No. 14351

CAS Registry No.: 500-62-9
Formal Name: 4-methoxy-6-[(1E)-2-(4-methoxyphenyl)ethenyl]-2H-pyran-2-one
MF: 258.3
FW: $C_{15}H_{14}O_4$
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 218, 267, 357 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

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

Yangonin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, yangonin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Yangonin has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Yangonin is a natural kavalactone from the kava plant, *P. methysticum*. It enhances the binding of bicuculline at the γ -amino butyric acid (GABA) receptor $GABA_A$ at $1.0 \mu M$.¹ Yangonin also binds the central cannabinoid (CB_1) receptor with a K_i value of $0.72 \mu M$, but whether it serves as an agonist or antagonist at this receptor remains to be determined.² Yangonin also blocks the activation of NF- κB by TNF- α .³ It also inhibits anchorage-dependent and independent growth of bladder cancer cell lines through induction of autophagic cell death ($IC_{50}s = 15-59 \text{ mg/ml}$).⁴

References

1. Boonen, G. and Häberlein, H. Influence of genuine kavapyrone enantiomers on the $GABA_A$ binding site. *Planta Med.* **64**(6), 504-506 (1998).
2. Ligresti, A., Villano, R., Allarà, M., et al. Kavalactones and the endocannabinoid system: The plant-derived yangonin is a novel CB_1 receptor ligand. *Pharmacol. Res.* **66**(2), 163-169 (2012).
3. Ma, J., Liang, H., Jin, H.R., et al. Yangonin blocks tumor necrosis factor- α -induced nuclear factor- κB -dependent transcription by inhibiting the transactivation potential of the RelA/p65 subunit. *J. Pharmacol. Sci.* **118**(4), 447-454 (2012).
4. Zhongbo, L., U-Syn, H., Ke, Y., et al. Kavalactone yangonin induces autophagy and sensitizes bladder cancer cells to flavokawain A and docetaxel via inhibition of the mTOR pathway. *J. Biomed. Res.* **31**(5), 408-418 (2017).

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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