

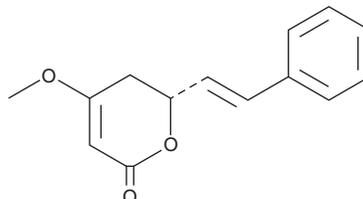
PRODUCT INFORMATION



(+)-Kavain

Item No. 26524

CAS Registry No.: 500-64-1
Formal Name: (6R)-5,6-dihydro-4-methoxy-6-[(1E)-2-phenylethenyl]-2H-pyran-2-one
Synonyms: Kawain, NSC 112162
MF: C₁₄H₁₄O₃
FW: 230.3
Purity: ≥98%
UV/Vis.: λ_{max}: 210, 245 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

(+)-Kavain is supplied as a crystalline solid. A stock solution may be made by dissolving the (+)-kavain in the solvent of choice. (+)-Kavain is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of (+)-kavain in ethanol is approximately 5 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Description

(+)-Kavain is a kavalactone and the major constituent of the pepper plant kava (*P. methysticum*) and has diverse biological activities.¹⁻⁴ It is a positive allosteric modulator of α4β2δ subunit-containing GABA_A receptors with EC₅₀ values of 25 and 59 μM in the presence and absence of 300 μM (+)-kavain, respectively, in *Xenopus* oocytes expressing human receptors.¹ (+)-Kavain reduces growth of WPMY-1 prostate cancer cells (IC₅₀ = 5.2 μg/ml).² It reduces LPS-induced TNF-α production in primary murine macrophages in a concentration-dependent manner.³ *In vivo*, (+)-kavain (1 mg/animal) reduces hind paw swelling and TNF-α production in wild-type, but not *Erk*^{-/-}, mice in a mouse model of collagen-induced arthritis. (+)-Kavain also reduces acetic acid-induced abdominal constrictions in mice (ED₅₀ = 15.71 mg/kg).⁴

References

1. Chua, H.C., Christensen, E.T., Hoestgaard-Jensen, K., *et al.* Kavain, the major constituent of the anxiolytic kava extract, potentiates GABA_A receptors: Functional characteristics and molecular mechanism. *PLoS One* **11(6)**, e0157700 (2016).
2. Li, X., Liu, Z., Xu, X., *et al.* Kava components down-regulate expression of AR and AR splice variants and reduce growth in patient-derived prostate cancer xenografts in mice. *PLoS One* **7(2)**, e31213 (2012).
3. Tang, X. and Amar, S. Kavain Inhibition of LPS-Induced TNF-α via ERK/LITAF. *Toxicol. Res. (Camb)*. **5(1)**, 188-196 (2016).
4. Kormann, E.C., de Aguiar Amaral, P., David, M., *et al.* Kavain analogues as potential analgesic agents. *Pharmacol. Rep.* **64(6)**, 1419-1426 (2012).

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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