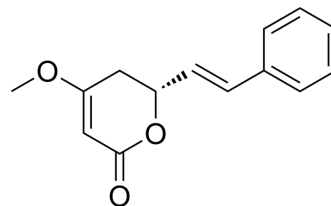


(+)-Kavain

| | |
|---------------------------|--|
| Cat. No.: | HY-B1671 |
| CAS No.: | 500-64-1 |
| Molecular Formula: | C ₁₄ H ₁₄ O ₃ |
| Molecular Weight: | 230.26 |
| Target: | GABA Receptor; Sodium Channel; Calcium Channel |
| Pathway: | Membrane Transporter/Ion Channel; Neuronal Signaling |
| Storage: | 4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light) |



SOLVENT & SOLUBILITY

| In Vitro | DMSO : 50 mg/mL (217.15 mM; Need ultrasonic) | | | | | | | | | | | | | | | | | |
|--------------------------|---|--------------------------|-----------|------------|------------|-------|------|-----------|------------|------------|------|-----------|-----------|-----------|-------|-----------|-----------|-----------|
| | <table border="1"> <thead> <tr> <th rowspan="2">Solvent Concentration</th> <th rowspan="2">Mass</th> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td>1 mM</td> <td>4.3429 mL</td> <td>21.7146 mL</td> <td>43.4292 mL</td> </tr> <tr> <td>5 mM</td> <td>0.8686 mL</td> <td>4.3429 mL</td> <td>8.6858 mL</td> </tr> <tr> <td>10 mM</td> <td>0.4343 mL</td> <td>2.1715 mL</td> <td>4.3429 mL</td> </tr> </tbody> </table> | Solvent Concentration | Mass | 1 mg | 5 mg | 10 mg | 1 mM | 4.3429 mL | 21.7146 mL | 43.4292 mL | 5 mM | 0.8686 mL | 4.3429 mL | 8.6858 mL | 10 mM | 0.4343 mL | 2.1715 mL | 4.3429 mL |
| Solvent Concentration | Mass | | | 1 mg | 5 mg | 10 mg | | | | | | | | | | | | |
| | | 1 mM | 4.3429 mL | 21.7146 mL | 43.4292 mL | | | | | | | | | | | | | |
| 5 mM | 0.8686 mL | 4.3429 mL | 8.6858 mL | | | | | | | | | | | | | | | |
| 10 mM | 0.4343 mL | 2.1715 mL | 4.3429 mL | | | | | | | | | | | | | | | |
| | Please refer to the solubility information to select the appropriate solvent. | | | | | | | | | | | | | | | | | |
| In Vivo | <ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (9.03 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (9.03 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (9.03 mM); Clear solution | | | | | | | | | | | | | | | | | |

BIOLOGICAL ACTIVITY

| | |
|-------------------------------------|--|
| Description | (+)-Kavain, a main kavalactone extracted from Piper methysticum, has anticonvulsive properties, attenuating vascular smooth muscle contraction through interactions with voltage-dependent Na ⁺ and Ca ²⁺ channels ^[1] . (+)-Kavain is shown to bind at the α4β2δ GABA _A receptor and potentiate GABA efficacy ^[2] . (+)-Kavain is used as a treatment for inflammatory diseases, its anti-inflammatory action has been widely studied ^[4] . |
| IC₅₀ & Target | Na ⁺ , Ca ²⁺ channel ^[1] . α4β2δ GABA _A receptor ^[2] . |

In Vitro

(+)-Kavain (10-300 μ M) enhances GABA-elicited responses in a concentration-dependent manner. The modulatory effect of Kavain is moderate, with only $170 \pm 23\%$ of enhancement measured at 300 μ M^[2]. (+)-Kavain inhibits TNF- α secretion in cells via suppression of LITAF^[4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Bradić I, et al. [Hirschsprung's disease -- therapy and results]. Acta Chir Jugosl. 1975;22(2):183-95.
- [2]. Chua HC, et al. Kavain, the Major Constituent of the Anxiolytic Kava Extract, Potentiates GABAA Receptors: Functional Characteristics and Molecular Mechanism. PLoS One. 2016 Jun 22;11(6):e0157700.
- [3]. G. Boonen, et al. In vivo Effects of the Kavapyrones (+)-Dihydromethysticin and (\pm)-Kavain on Dopamine, 3,4-Dihydroxyphenylacetic Acid, Serotonin and 5-Hydroxyindoleacetic Acid Levels in Striatal and Cortical Brain Regions. Planta Medica 64 (1998) 507-510.
- [4]. Tang X, et al. Kavain Inhibition of LPS-Induced TNF- α via ERK/LITAF. Toxicol Res (Camb). 2016 Jan 1;5(1):188-196.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA