

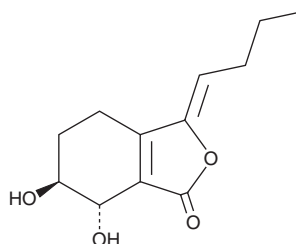
PRODUCT INFORMATION



Senkyunolide I

Item No. 35649

CAS Registry No.: 94596-28-8
Formal Name: (3Z,6R,7R)-rel-3-butylidene-4,5,6,7-tetrahydro-6,7-dihydroxy-1(3H)-isobenzofuranone
MF: $C_{12}H_{16}O_4$
FW: 224.3
Purity: $\geq 98\%$
UV/Vis.: $\lambda_{\max}$: 274 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Plant/*Ligusticum chuanxiong* Hort.



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

Laboratory Procedures

Senkyunolide I is supplied as a solid. A stock solution may be made by dissolving the senkyunolide I in the solvent of choice, which should be purged with an inert gas. Senkyunolide I is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of senkyunolide I in these solvents is approximately 25, 10, and 15 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of senkyunolide I can be prepared by directly dissolving the solid in aqueous buffers. The solubility of senkyunolide I in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Senkyunolide I is a phthalide that has been found in *L. chuanxiong* and has diverse biological activities.¹⁻⁴ It inhibits TNF- α -induced NF- κ B reporter gene expression in HEK293 cells and reduces LPS-induced IL-8 and IL-6 production in THP-1 cells when used at a concentration of 100 μM .¹ *In vivo*, senkyunolide I (32 mg/kg) reduces acetic acid-induced writhing and increases the latency to paw withdrawal in the hot plate test in mice.³ Senkyunolide I (36 mg/kg, i.p.) increases survival, decreases plasma levels of TNF- α , IL-1 β , and IL-6, and protects against cognitive dysfunction in a mouse model of sepsis induced by cecal ligation and puncture (CLP).⁴

References

1. Jiang, M., Zhou, M., Han, Y., *et al.* Identification of NF- κ B Inhibitors in Xuebijing injection for sepsis treatment based on bioactivity-integrated UPLC-Q/TOF. *J. Ethnopharmacol.* **147**(2), 426-433 (2013).
2. Huang, Y., Wu, Y., Yin, H., *et al.* Senkyunolide I: A review of its phytochemistry, pharmacology, pharmacokinetics, and drug-likeness. *Molecules* **28**(8), 3636 (2023).
3. Wang, Y.-H. Effect and mechanism of senkyunolide I as an anti-migraine compound from *Ligusticum chuanxiong*. *J. Pharm. Pharmacol.* **63**(2), 261-266 (2010).
4. Xie, J., Zhao, Z.-Z., Li, P., *et al.* Senkyunolide I protects against sepsis-associated encephalopathy by attenuating sleep deprivation in a murine model of cecal ligation and puncture. *Oxid. Med. Cell. Longev.* 6647258 (2021).

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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