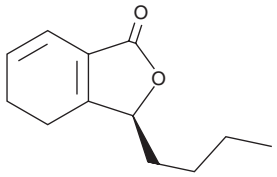
PRODUCT INFORMATION

Senkyunolide A

Item No. 25199

CAS Registry No.: 63038-10-8
Formal Name: (3S)-3-butyl-4,5-dihydro-1(3H)-isobenzofuranone
Synonyms: (–)-Sedanenolide, (S)-Sedanenolide
MF: $C_{12}H_{16}O_2$
FW: 192.3
Purity: ≥98%
UV/Vis.: λ_{max}: 278 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Senkyunolide A is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of senkyunolide A in these solvents is approximately 5 mg/ml.

Senkyunolide A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of senkyunolide A should be diluted with the aqueous buffer of choice. Senkyunolide A has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method.

Description

Senkyunolide A is a phthalide originally isolated from celery seed essential oil that has cytoprotective and antiproliferative activities.[1] It protects against cell injury induced by corticosterone in PC12 cells in a time-dependent manner when used at concentrations ranging from 0.125 to 0.5 mg/ml and reduces corticosterone-induced apoptosis at a concentration of 0.5 mg/ml.[2] It also reverses increases in protein levels of phosphatase 2A (PP2A) and α-synuclein and reverses decreases in the phosphorylated forms of PP2A and α-synuclein. Senkyunolide A inhibits cell proliferation of HT-29 colon cancer (IC_{50} = 54.17 µM) but not non-cancerous human CCD-18Co colon cells (IC_{50} = 109.11 µM).[3]

References

1. Bjeldanes, L.F. and Kim, I.-S. Phthalide components of celery essential oil. *J. Org. Chem.* **42(13)**, 2333-2334 (1977).
2. Gong, S., Zhang, J., Guo, Z., *et al.* Senkyunolide A protects corticosterone-induced cell apoptosis *via* modulating protein phosphatase 2A and α-synuclein. *Drug Des. Devel. Ther.* **12**, 1865-1879 (2018).
3. Kan, W.L., Cho, C.H., Rudd, J.A., *et al.* Study of the anti-proliferative effects and synergy of phthalides from *Angelica sinensis* on colon cancer cells. *J. Ethnopharmacol.* **120(1)**, 36-43 (2008).

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