# PRODUCT INFORMATION

## Asarinin

*Item No. 27456*

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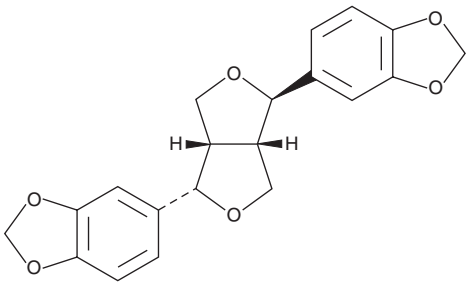
|---|---|
| **CAS Registry No.:** | 133-04-0 |
| **Formal Name:** | 5,5'-[(1R,3aS,4S,6aS)-tetrahydro-1H,3H-furo[3,4-c]furan-1,4-diyl]*bis*-1,3-benzodioxole |
| **Synonyms:** | (–)-Asarinin, L-Asarinin, Desgeranyloxyarmatumin, (–)-Episesamin |
| **MF:** | $C_{20}H_{18}O_6$ |
| **FW:** | 354.4 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 237, 288 nm |
| **Supplied as:** | A solid |
| **Storage:** | -20°C |
| **Stability:** | ≥4 years |
| **Item Origin:** | Plant/Magnoliae flos |



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

### Laboratory Procedures

Asarinin is supplied as a solid. A stock solution may be made by dissolving the asarinin in the solvent of choice, which should be purged with an inert gas. Asarinin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of asarinin in these solvents is approximately 10 and 20 mg/ml, respectively.

Asarinin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, asarinin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Asarinin has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Asarinin is a lignan that has been found in *A. sieboldii*.[1] It is an epimer of sesamin (Item No. 70310) and a noncompetitive inhibitor of $\Delta^5$-desaturase ($K_i$ = 0.28 mM).[2] It is selective for $\Delta^5$-desaturase over $\Delta^6$- and $\Delta^9$-desaturase. Asarinin is cytotoxic to A2780 and SKOV3 ovarian cancer cells ($IC_{50}$s = 38.45 and 60.87 µM, respectively) but not immortalized ovarian surface epithelial cells ($IC_{50}$ = >200 µM).[1] It induces apoptosis and activates caspase-3, -8, and -9 in A2780 and SKOV3 cells.

### References


1. Jeong, M., Kim, H.M., Lee, J.S., *et al.* (-)-Asarinin from the roots of *Asarum sieboldii* induces apoptotic cell death via caspase activation in human ovarian cancer cells. *Molecules* **23(3)**, E1849 (2018).
2. Shimizu, S., Kawashima, H., Akimoto, K., *et al.* Inhibition of $\Delta^5$-desaturase in polyunsaturated fatty acid biosynthesis by (–)-asarinin and (–)-epiasarinin. *Phytochemistry* **31(3)**, 757-760 (1992).





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