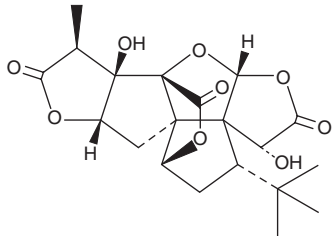
PRODUCT INFORMATION

Ginkgolide A

Item No. 24970

CAS Registry No.: 15291-75-5
Formal Name: (1R,3S,3aS,4R,6aR,7aR,7bR,8S,10aS,11aS)-3-(1,1-dimethylethyl)hexahydro-4,7b-dihydroxy-8-methyl-9H-1,7a-(epoxymethano)-1H,6aH-cyclopenta[c]furo[2,3-b]furo[3',2':3,4]cyclopenta[1,2-d]furan-5,9,12(4H)-trione
Synonym: BN 52020
MF: $C_{20}H_{24}O_9$
FW: 408.4
Purity: ≥98%
UV/Vis.: λ_{max}: 218 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Ginkgo biloba* L.



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

Laboratory Procedures

Ginkgolide A is supplied as a crystalline solid. A stock solution may be made by dissolving the ginkgolide A in the solvent of choice. Ginkgolide A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. Ginkgolide A has a solubility of approximately 3 mg/ml in ethanol and approximately 20 mg/ml in DMSO and DMF.

Ginkgolide A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ginkgolide A should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Ginkgolide A has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ginkgolide A is a terpenoid lactone originally isolated from *G. biloba* leaves with diverse biological activities.[1] Ginkgolide A inhibits platelet activating factor-dependent aggregation of human platelets (IC_{50} = 15.8 µg/ml).[2] It also inhibits GABA-induced currents in *Xenopus* oocytes expressing human $\alpha_1\beta_2\gamma_{2L}$ $GABA_A$ receptors with an IC_{50} value of 12 µM.[3] Ginkgolide A (100 µM) reduces the proliferation rate of OVCA429 ovarian cancer cells by 40%.[4] *In vivo*, ginkgolide A (1-2 mg/kg, p.o.) increases the time spent in the open arms of the elevated plus maze by 3-fold without altering activity level in mice, indicating anxiolytic-like activity.[5] Ginkgolide A (10 mg/kg, p.o.) also reduces hexobarbital-induced sleeping time in mice by 44%.[6] Ginkolide A (30 mg/kg per day) increases activity of the cytochrome P450 (CYP450) isoforms CYP1A2 and CYP2E1 by 1.82- and 1.27-fold, respectively, in rats.[1]

References

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2. Koch, E. *Phytomedicine* **12(1-2)**, 10-16 (2005).
3. Huang, S.H., Duke, R.K., Chebib, M., *et al. Eur. J. Pharmacol.* **494(2-3)**, 131-138 (2004).
4. Ye, B., Aponte, M., Dai, Y., *et al. Cancer Lett.* **251(1)**, 43-52 (2007).
5. Kuribara, H., Weintraub, S.T., Yoahihama, T., *et al. J. Nat. Prod.* **66(10)**, 1333-1337 (2003).
6. Wada, K., Sasaki, K., Miura, K., *et al. Biol. Pharm. Bull.* **16(2)**, 210-212 (1993).

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