

PRODUCT INFORMATION



Bacopaside I Item No. 11821

CAS Registry No.: 382148-47-2
Formal Name: (1S,2R,4aR,6aS,6bR,8aR,10S,12aR,12bR,14aR,14bS)-hexadecahydro-1-hydroxy-1,6b,9,9,12a-pentamethyl-2-(2-methyl-1-propen-1-yl)-4a,6a-methano-1H,6H-phenanthro[2,1-d]pyrano[2,3-b]pyran-10-yl O- α -L-arabinofuranosyl-(1 \rightarrow 2)-O-[6-O-sulfo- β -D-glucopyranosyl-(1 \rightarrow 3)]- α -L-arabinopyranoside

MF: C₄₆H₇₄O₂₀S
FW: 979.1

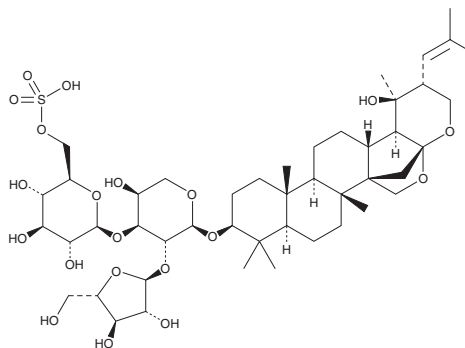
Purity: \geq 95%

Supplied as: A solid

Storage: -20°C

Stability: \geq 4 years

Item Origin: Plant/*Bacopa monnieri* (L.) Wettst.



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

Laboratory Procedures

Bacopaside I is supplied as a solid. A stock solution may be made by dissolving the bacopaside I in the solvent of choice, which should be purged with an inert gas. Bacopaside I is soluble in methanol.

Description

Bacopaside I is a saponin that has been found in *B. monniera* and has diverse biological activities.⁴ It inhibits monoamine oxidase A (MAO-A) and MAO-B (IC₅₀s = 17.08 and 94.22 μ g/ml, respectively).¹ Bacopaside I (5, 15, and 50 mg/kg) decreases immobility time in the tail suspension and forced swim tests, as well as brain malondialdehyde (MDA) levels, and increases brain superoxide dismutase (SOD) and glutathione peroxidase (GPX) activities in mice.² It increases time spent in the target quadrant in the Morris water maze and reduces amyloid plaque formation in the APP/PS1 transgenic mouse model of Alzheimer's disease.³ Bacopaside I (3, 10, and 30 mg/kg) reduces cerebral edema and infarct volume in a rat model of transient focal ischemia induced by middle cerebral artery occlusion.⁴

References

1. Singh, R., Ramakrishna, R., Bhatia, M., *et al.* *In vitro* evaluation of *Bacopa monniera* extract and individual constituents on human recombinant monoamine oxidase enzymes. *Phytother. Res.* **28(9)**, 1419-1422 (2014).
2. Liu, X., Liu, F., Yue, R., *et al.* The antidepressant-like effect of bacopaside I: Possible involvement of the oxidative stress system and the noradrenergic system. *Pharmacol. Biochem. Behav.* **110**, 224-230 (2013).
3. Li, Y., Yuan, X., Shen, Y., *et al.* Bacopaside I ameliorates cognitive impairment in APP/PS1 mice via immune-mediated clearance of β -amyloid. *Aging (Albany NY)* **8(3)**, 521-533 (2016).
4. Liu, X., Yue, R., Zhang, J., *et al.* Neuroprotective effects of bacopaside I in ischemic brain injury. *Restor. Neurol. Neurosci.* **31(2)**, 109-123 (2013).

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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