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## Product Data Sheet

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Product Name: Bacopaside I

Cat. No.: GC35457

### Chemical Properties

Cas. No. 382148-47-2

Formula C<sub>46</sub>H<sub>74</sub>O<sub>20</sub>S

M.Wt 979.13

Solubility DMSO : 100 mg/mL (102.13 mM; Need ultrasonic) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

### Background

Bacopaside I is a saponin that has been found in *B. monniera* and has diverse biological activities.<sup>1,2,3,4</sup> It inhibits monoamine oxidase A (MAO-A) and MAO-B (IC<sub>50</sub>s = 17.08 and 94.22 μg/ml, respectively).<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup> 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.<sup>4</sup>

1. Singh, R., Ramakrishna, R., Bhateria, 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

**Caution: Product has not been fully validated for medical applications. For research use only.**

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APP/PS1 mice via immune-mediated clearance of  $\beta$ -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 injuryRestor. Neurol. Neurosci.31(2)109-123(2013)

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