

# PRODUCT INFORMATION

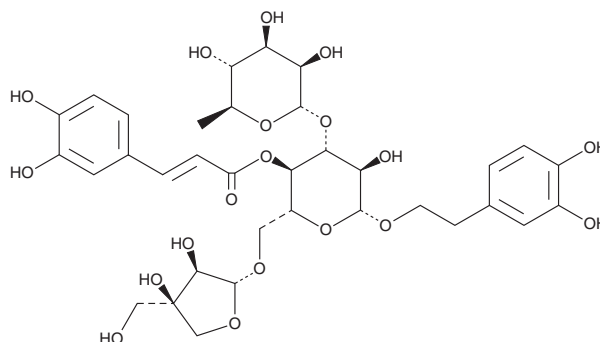


## Forsythoside B

Item No. 29051

**CAS Registry No.:** 81525-13-5  
**Formal Name:** 2-(3,4-dihydroxyphenyl)ethyl O-D-apio-β-D-furanosyl-(1→6)-O-[6-deoxy-α-L-mannopyranosyl-(1→3)]-β-D-glucopyranoside, 4-[(2E)-3-(3,4-dihydroxyphenyl)-2-propenoate]

**MF:** C<sub>34</sub>H<sub>44</sub>O<sub>19</sub>  
**FW:** 756.7  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 333 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/*Callicarpa kwangtungensis*



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

### Laboratory Procedures

Forsythoside B is supplied as a crystalline solid. A stock solution may be made by dissolving the forsythoside B in the solvent of choice, which should be purged with an inert gas. Forsythoside B is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of forsythoside B in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of forsythoside B can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of forsythoside B in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Forsythoside B is phenylpropanoid glycoside that has been found in *M. alysson* and has diverse biological activities.<sup>1-5</sup> It scavenges PTIO (Item No. 14982), ABTS (Item No. 27317), O<sub>2</sub><sup>-</sup>, and 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals in cell-free assays (IC<sub>50</sub>s = 125.5, 14, 262.6, and 8.7 μM, respectively).<sup>2</sup> Forsythoside B (10-100 μg/ml) reduces hydrogen peroxide-induced cytotoxicity in bone marrow-derived mesenchymal stem cells (bmMSCs). It inhibits 2-aminoethoxydiphenyl borate-induced activation of transient receptor potential vanilloid 3 (TRPV3; IC<sub>50</sub> = 6.7 μM in HEK293 cells expressing the human receptor) and reduces carvacrol-induced scratching behavior in mice.<sup>3</sup> Forsythoside B (40 mg/kg) reduces serum levels of TNF-α, IL-6, IL-10, endotoxin, and triggering receptor expressed on myeloid cells 1 (TREM-1) and increases survival in a rat model of cecal ligation and puncture-induced sepsis.<sup>4</sup> It also reduces infarct size and brain edema in a rat model of cerebral ischemia and reperfusion injury induced by middle cerebral artery occlusion.<sup>5</sup>

### References

1. Çaliş, İ., Hosny, M., Khalifa, T., et al. *Phytochemistry* **31(10)**, 3624-3626 (1992).
2. Li, X., Xie, Y., Li, K., et al. *Molecules* **23(2)**, E498 (2018).
3. Zhang, H., Sun, X., Qi, H., et al. *J. Pharmacol. Exp. Ther.* **368(1)**, 21-31 (2018).
4. Jiang, W.-L., Yong-Xu, Zhang, S.-P., et al. *Phytother. Res.* **26(7)**, 981-987 (2012).
5. Jiang, W.-L., Tian, J.-W., Fu, F.-h., et al. *Eur. J. Pharmacol.* **640(1-3)**, 75-81 (2010).

#### 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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