

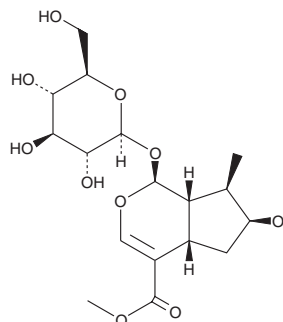
# PRODUCT INFORMATION



## Loganin

Item No. 19997

**CAS Registry No.:** 18524-94-2  
**Formal Name:** 1-(β-D-glucopyranosyloxy)-1S,4aS,5,6S,7R,7aS-hexahydro-6-hydroxy-7-methyl-cyclopenta[c]pyran-4-carboxylic acid, methyl ester  
**Synonyms:** NSC 606403, 7-hydroxy-6-desoxy Verbenalin  
**MF:** C<sub>17</sub>H<sub>26</sub>O<sub>10</sub>  
**FW:** 390.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 236 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/Cornus



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

### Laboratory Procedures

Loganin is supplied as a crystalline solid. A stock solution may be made by dissolving the loganin in the solvent of choice, which should be purged with an inert gas. Loganin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of loganin in these solvents is approximately 10 and 15 mg/ml, respectively.

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 loganin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of loganin in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Loganin is an iridoid glycoside that has been found in *C. fructus* and has diverse biological activities.<sup>1-4</sup> It reduces hydrogen peroxide-induced apoptosis in SH-SY5Y cells when used at concentrations ranging from 0.25 to 12.5 μM.<sup>1</sup> Loganin inhibits COX-1 activity (IC<sub>50</sub> = 3.55 μM), as well as LPS-induced TNF-α formation (IC<sub>50</sub> = 154.6 μM) in RAW 264.7 cells.<sup>2</sup> *In vivo*, loganin (20 and 100 mg/kg) reduces food intake, blood glucose levels, and serum triglyceride levels, as well as increases serum HDL levels in *db/db* diabetic mice.<sup>3</sup> It attenuates scopolamine-induced memory deficits in the Morris water maze and passive avoidance test in mice.<sup>4</sup> Loganin (20 and 1,000 mg/kg) reduces serum and kidney advanced glycation end-product (AGE) and malondialdehyde (MDA) levels and improves renal function in a mouse model of diabetic nephropathy.<sup>5</sup>

### References

1. Kwon, S. H., Kim, J. A., Hong, S. I., et al. *Neurochem Int.* **58(4)**, 533-541 (2011).
2. Park, K. S., Kim, B. H. and Chang, I. M. *Evid. Based Complement. Med.* **7(1)**, 41-45 (2010).
3. Yamabe, N., Noh, J.S., Park, C.H., et al. *Eur. J. Pharmacol.* **648(1-3)**, 179-187 (2010).
4. Lee, K.Y., Sung, S.H., Kim, S.H., et al. *Arch. Pharm. Res.* **32(5)**, 677-683 (2009).
5. Liu, K., Xu, H., Lv, G., et al. *Life Sci.* **123**, 78-85 (2015).

#### 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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