

# PRODUCT INFORMATION



## Prunin

Item No. 34034

**CAS Registry No.:** 529-55-5  
**Formal Name:** (2S)-7-(β-D-glucopyranosyloxy)-2,3-dihydro-5-hydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one

**Synonyms:** Naringenin 7-O-glucoside,  
Naringenin 7-O-β-D-glucopyranoside,  
NSC 135064

**MF:** C<sub>21</sub>H<sub>22</sub>O<sub>10</sub>

**FW:** 434.4

**Purity:** ≥98%

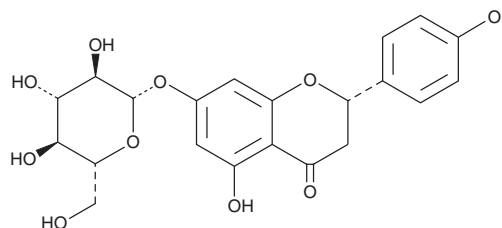
**UV/Vis.:** λ<sub>max</sub>: 215, 227, 284 nm

**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥4 years

**Item Origin:** Synthetic



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

## Laboratory Procedures

Prunin is supplied as a solid. A stock solution may be made by dissolving the prunin in the solvent of choice, which should be purged with an inert gas. Prunin is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of prunin in these solvents is approximately 20 and 30 mg/ml, respectively.

Prunin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, prunin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Prunin has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

Prunin is a polyketide synthase-derived flavonoid glycoside that has been found in *G. glabra* and has diverse biological activities.<sup>1-5</sup> It inhibits neuraminidase (NA) activity in oseltamivir-sensitive and -resistant H1N1 influenza strains (IC<sub>50</sub>s = 3 and 4.53 μM, respectively).<sup>2</sup> Prunin (2 μM) scavenges DPPH radicals in a cell-free assay.<sup>3</sup> It inhibits the activity of protein tyrosine phosphatase 1B (PTP1B; IC<sub>50</sub> = 5.5 μM for the human enzyme) and increases insulin-induced glucose uptake in insulin-resistant HepG2 hepatocellular carcinoma cells in a concentration-dependent manner.<sup>4</sup> Prunin inhibits the proliferation of, and induces apoptosis in, HL-60 leukemia cells.<sup>5</sup>

## References

1. Sharma, P., Kumar, V., and Guleria, P. *Indian J. Pharm. Sci.* **81(6)**, 988-999 (2019).
2. Grienke, U., Braun, H., Seidel, N., et al. *J. Nat. Prod.* **77(3)**, 563-570 (2014).
3. Sang, S., Lapsley, K., Jeong, W.-S., et al. *J. Agric. Food Chem.* **50(8)**, 2459-2463 (2002).
4. Jung, H.A., Ali, M.Y., Bhakta, K., et al. *Arch. Pharm. Res.* **40(1)**, 37-48 (2017).
5. Tung, N.H., Son, J.-H., Cho, K., et al. *Food Sci. Biotechnol.* **19(1)**, 271-274 (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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