

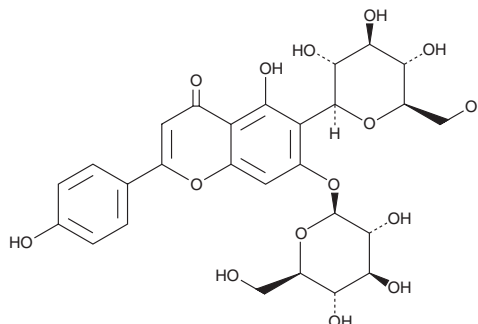
# PRODUCT INFORMATION



## Saponarin

Item No. 35805

**CAS Registry No.:** 20310-89-8  
**Formal Name:** 6-β-D-glucopyranosyl-7-(β-D-glucopyranosyloxy)-5-hydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one  
**Synonyms:** Isovitexin 7-glucoside, Petrocomoside  
**MF:** C<sub>27</sub>H<sub>30</sub>O<sub>15</sub>  
**FW:** 594.5  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 272, 334 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/*Vaccaria segetalis* seed



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

### Laboratory Procedures

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

### Description

Saponarin is a flavonoid glycoside that has been found in *H. vulgare* and has diverse biological activities.<sup>1-4</sup> It prevents UV- or Fenton's reagent-induced lipid peroxidation in cell-free assays.<sup>1</sup> Saponarin (50 and 100 μM) increases intracellular calcium concentrations and induces AMPK phosphorylation in HepG2 and TE 671 cells, as well as increases glucose uptake and reduces glucose production in HepG2 cells.<sup>2</sup> It inhibits the LPS-induced production of TNF-α and IL-1β in RAW 264.7 cells and induces the expression of skin barrier genes encoding hyaluronan synthase-3, aquaporin-3, and the antimicrobial peptide LL-37 in HaCaT cells.<sup>3</sup> *In vivo*, saponarin (80 mg/kg, p.o) reduces cocaine-induced production of thiobarbituric acid reactive substances (TBARS), decreases in hepatic levels of catalase, superoxide dismutase (SOD), and glutathione peroxidase (GPX), and hepatotoxicity in rats.<sup>4</sup>

### References

1. Kamiyama, M. and Shibamoto, T. Flavonoids with potent antioxidant activity found in young green barley leaves. *J. Agric. Food Chem.* **60(25)**, 6260-6267 (2012).
2. Seo, W.-D., Lee, J.H., Jia, Y., et al. Saponarin activates AMPK in a calcium-dependent manner and suppresses gluconeogenesis and increases glucose uptake via phosphorylation of CRT2 and HDAC5. *Bioorg. Med. Chem. Lett.* **25(22)**, 5237-5242 (2015).
3. Min, S.-Y., Park, C.-H., Yu, H.-W., et al. Anti-inflammatory and anti-allergic effects of saponarin and its impact on signaling pathways of RAW 264.7, RBL-2H3, and HaCaT cells. *Int. J. Mol. Sci.* **22(16)**, 8431 (2021).
4. Vitcheva, V., Simeonova, R., Krasteva, I., et al. Hepatoprotective effects of saponarin, isolated from *Gypsophila trichotoma* Wend. on cocaine-induced oxidative stress in rats. *Redox Rep.* **16(2)**, 56-61 (2011).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM