

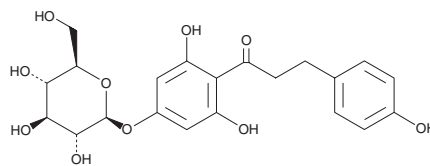
# PRODUCT INFORMATION



## Trilobatin

Item No. 25837

**CAS Registry No.:** 4192-90-9  
**Formal Name:** 1-[4-(β-D-glucopyranosyloxy)-2,6-dihydroxyphenyl]-3-(4-hydroxyphenyl)-1-propanone  
**Synonym:** Phloretin-4-O-glucoside  
**MF:** C<sub>21</sub>H<sub>24</sub>O<sub>10</sub>  
**FW:** 436.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 225, 283 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Trilobatin is supplied as a crystalline solid. A stock solution may be made by dissolving the trilobatin in the solvent of choice, which should be purged with an inert gas. Trilobatin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of trilobatin in ethanol and DMF is approximately 20 mg/ml and approximately 25 mg/ml in DMSO.

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 trilobatin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of trilobatin in PBS (pH 7.2) is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Trilobatin is a dihydrochalcone glucoside and derivative of phloretin (Item No. 14452) that has been found in Rooibos (*A. linearis*) tea and has diverse biological activities.<sup>1-5</sup> It reduces survival of Bel 7402 and HepG2 cancer cells when used at a concentration of 100 μM.<sup>2</sup> Trilobatin increases superoxide dismutase (SOD) and glutathione peroxidase (GPX) activity (EC<sub>50</sub>s = 129 and 128 μM, respectively) and inhibits lipid peroxidation (IC<sub>50</sub> = 88 μM) in rat liver homogenates.<sup>3</sup> Pretreatment with trilobatin reduces hydrogen peroxide-induced cell death and production of mitochondrial reactive oxygen species (ROS), prevents reduction in the mitochondrial membrane potential, and increases the activity of GPX, SOD2, and isocitrate dehydrogenase 2 (IDH2) in PC12 neuronal cells.<sup>4</sup> Trilobatin inhibits infection by various HIV-1 strains (IC<sub>50</sub>s = 2.91-27.11 μM) without inducing cytotoxicity in target cells.<sup>5</sup>

### References

1. Stander, M.A., Van Wyk, B.-E., Taylor, M.J.C., et al. *J. Agric. Food Chem.* **65**(47), 10270-10281 (2017).
2. Qin, X., Xing, Y.F., Zhou, Z., et al. *Molecules* **20**(12), 21193-21203 (2015).
3. Yang, W.-M., Liu, J.-K., Qin, X.-D., et al. *Z. Naturforsch. C.* **59**(7-8), 481-484 (2004).
4. Gao, J., Liu, S., Xu, F., et al. *Front. Mol. Neurosci.* **11**:267, (2018).
5. Yin, S., Zhang, X., Lai, F., et al. *FEBS Lett.* **592**(13), 2361-2377 (2018).

#### 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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