

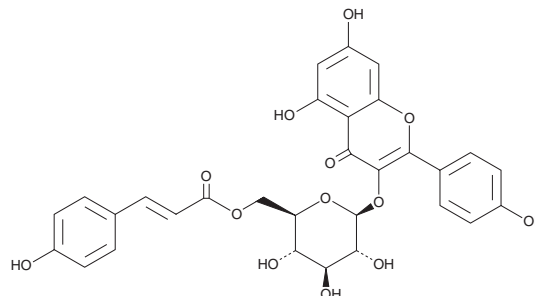
PRODUCT INFORMATION



Tiliroside

Item No. 34493

CAS Registry No.: 20316-62-5
Formal Name: 5,7-dihydroxy-2-(4-hydroxyphenyl)-3-[[6-O-[(2E)-3-(4-hydroxyphenyl)-1-oxo-2-propen-1-yl]-β-D-glucopyranosyl]oxy]-4H-1-benzopyran-4-one
Synonyms: Kaempferol 3-O-β-D-Glucopyranoside-6-*p*-coumaril ester, Kaempferol 3-O-β-D-(6''-E-*p*-coumaroyl)-glucopyranoside
MF: C₃₀H₂₆O₁₃
FW: 594.5
Purity: ≥98%
UV/Vis.: λ_{max}: 268, 317 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Edgeworthia chrysantha*



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

Laboratory Procedures

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

Tiliroside is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tiliroside should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Tiliroside has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Tiliroside is a polyketide synthase-derived flavonoid glycoside that has been found in *Q. ilex* and has diverse biological activities.¹⁻⁵ It inhibits carbonic anhydrase VII (CAVII; K_i = 4.6 nM), but not CAI, CAII, CAIV, or CAXII (K_s = >10, >10, 5.46, and 0.134 μM, respectively), in a cell-free assay.⁵ Tiliroside scavenges DPPH (Item No. 14805) and superoxide radicals (IC₅₀s = 12.8 and 42 μM, respectively) and is cytotoxic to Jurkat, HepG2, and COLO 205 cells (IC₅₀s = 11.6, 14.3, and 55.4 μM, respectively).² It reduces ear edema induced by phorbol 12-myristate 13-acetate (TPA; Item No. 10008014) with an ID₅₀ value of 0.357 mg/ear.³ Tiliroside (100 mg/kg) decreases triglyceride accumulation in the liver and skeletal muscle in high-fat diet-fed KKAY diabetic mice.⁴

References

1. Grochowski, D.M., Locatelli, M., Granica, S., *et al.* A review on the dietary flavonoid tiliroside. *Compr. Rev. Food Sci. Food Saf.* **17**(5), 1395-1421 (2018).
2. Rao, Y.K., Geethangili, M., Fang, S.-H., *et al.* Antioxidant and cytotoxic activities of naturally occurring phenolic and related compounds: a comparative study. *Food Chem. Toxicol.* **45**(9), 1770-1776 (2007).
3. Sala, A., Recio, M.C., Schinella, G.R., *et al.* Assessment of the anti-inflammatory activity and free radical scavenger activity of tiliroside. *Eur. J. Pharmacol.* **461**(1), 53-61 (2003).
4. Goto, T., Teraminami, A., Lee, J.-Y., *et al.* Tiliroside, a glycosidic flavonoid, ameliorates obesity-induced metabolic disorders via activation of adiponectin signaling followed by enhancement of fatty acid oxidation in liver and skeletal muscle in obese-diabetic mice. *J. Nutr. Biochem.* **23**(7), 768-776 (2012).
5. Karioti, A., Ceruso, M., Carta, F., *et al.* New natural product carbonic anhydrase inhibitors incorporating phenol moieties. *Bioorg. Med. Chem.* **23**(22), 7219-7225 (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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/06/2022

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