

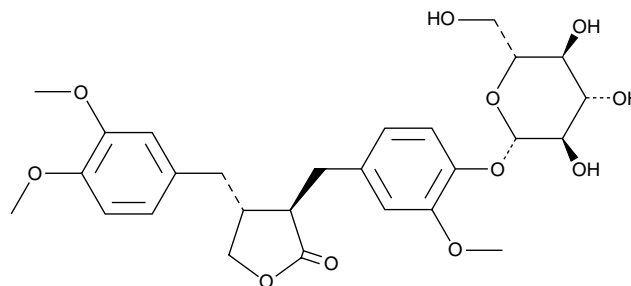
Product Information



Arctiin

Item No. 15375

CAS Registry No.: 20362-31-6
Formal Name: (3R,4R)-4-[(3,4-dimethoxyphenyl)methyl]-3-[[4-(β-D-glucopyranosyloxy)-3-methoxyphenyl]methyl]dihydro-2(3H)-furanone
Synonyms: Arctigenin-4-Glucoside, NSC 315527
MF: C₂₇H₃₄O₁₁
FW: 534.6
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 229, 280 nm



Laboratory Procedures

For long term storage, we suggest that arctiin be stored as supplied at -20°C. It should be stable for at least two years.

Arctiin is supplied as a crystalline solid. A stock solution may be made by dissolving the arctiin in the solvent of choice. Arctiin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of arctiin in ethanol is approximately 2 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Arctiin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, arctiin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Arctiin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Arctiin is the major active lignin in fruits of the burdock plant *A. lappa*. It demonstrates potent antiviral activity against influenza A virus and anti-inflammatory effects by decreasing the production of nitric oxide and pro-inflammatory cytokines.^{1,2} Arctiin is metabolized by human intestinal bacteria into various bioactive metabolites including arctigenin (Item No. 14913) and enterolactone (Item No. 10112), which respectively exhibit growth inhibitory and growth promoting activity in MCF-7 breast cancer cells at 10 μM.³

References

- Hayashi, K., Narutaki, K., Nagaoka, Y., *et al.* Therapeutic effect of arctiin and arctigenin in immunocompetent and immunocompromised mice infected with influenza A virus. *Biol. Pharm. Bull.* **33**(7), 1199-1205 (2010).
- Lee, S., Shin, S., Kim, H., *et al.* Anti-inflammatory function of arctiin by inhibiting COX-2 expression *via* NF-κB pathways. *J. Inflamm. (Lond)* **8**(1), 16 (2011).
- Xie, L.-H., Ahn, E.-M., Akao, T., *et al.* Transformation of arctiin to estrogenic and antiestrogenic substances by human intestinal bacteria. *Chem. Pharm. Bull. (Tokyo)* **51**(4), 378-384 (2003).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/15375

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. 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

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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