

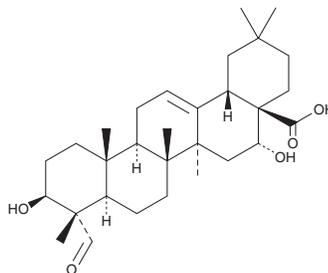
PRODUCT INFORMATION



Quillaic Acid

Item No. 31512

CAS Registry No.: 631-01-6
Formal Name: (3 β ,4 α ,16 α)-3,16-dihydroxy-23-oxo-olean-12-en-28-oic acid
Synonym: Quillaja Saponin
MF: C₃₀H₄₆O₅
FW: 486.7
Purity: \geq 98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years
Item Origin: Plant/Quillaja saponaria bark



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

Laboratory Procedures

Quillaic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the quillaic acid in the solvent of choice, which should be purged with an inert gas. Quillaic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of quillaic acid in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Quillaic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, quillaic acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Quillaic acid has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Quillaic acid is a triterpene saponin that has been found in *Q. saponaria* bark and has diverse biological activities.¹⁻³ It is cytotoxic to SNU-1 and KATO III gastric cancer cells (IC₅₀s = 13.6 and 67 μ M, respectively).¹ Quillaic acid induces hot plate analgesia in mice (ED₅₀ = 20.7 mg/kg).² It reduces ear edema induced by arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) or phorbol 12-myristate 13-acetate (TPA; Item No. 10008014) in mice when administered topically at doses of 0.7 and 1.6 mg/ear, respectively.³

References

1. Guzmán, L., Villalón, K., Marchant, M.J., *et al.* In vitro evaluation and molecular docking of QS-21 and quillaic acid from *Quillaja saponaria* Molina as gastric cancer agents. *Sci. Rep.* **10(1)**, 10534 (2020).
2. Arrau, S., Delporte, C., Cartagena, C., *et al.* Antinociceptive activity of *Quillaja saponaria* Mol. saponin extract, quillaic acid and derivatives in mice. *J. Ethnopharmacol.* **133(1)**, 164-167 (2011).
3. Rodríguez-Díaz, M., Delporte, C., Cartagena, C., *et al.* Topical anti-inflammatory activity of quillaic acid from *Quillaja saponaria* Mol. and some derivatives. *J. Pharm. Pharmacol.* **63(5)**, 718-724 (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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