

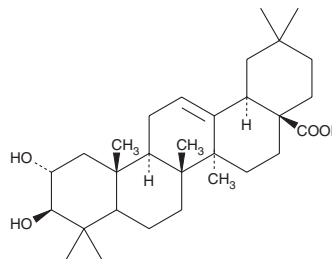
PRODUCT INFORMATION



Maslinic Acid

Item No. 10009645

CAS Registry No.:	4373-41-5
Formal Name:	2a,3b-dihydroxy-olean-12-en-28-oic acid
Synonyms:	Cratogenic Acid, 2a-Hydroxyoleanic Acid
MF:	C ₃₀ H ₄₈ O ₄
FW:	472.7
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Maslinic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the maslinic acid in an organic solvent purged with an inert gas. Maslinic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of maslinic acid in these solvents is approximately 0.5, 20, and 15 mg/ml, respectively.

Maslinic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, maslinic acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Maslinic acid has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Maslinic acid is found in a number of natural sources, most notably pomace olive oil (orujo). This pentacyclic triterpene has an antiproliferative effect against Caco-2 cancer cells (EC₅₀ = 15 μM), HT-29 human colon cancer cells (EC₅₀ = 74 μM), 1321N1 astrocytoma cells (IC₅₀ = 25 μM), and human leukemia (CCRF-CEM and CEM/ADR5000) cells (IC₅₀ = 7 μM and 9 μM respectively).¹⁻⁴ Maslinic acid's antiproliferative activity likely comes from the induction of an oxidative apoptotic pathway, causing cell cycle and cytoskeleton alterations attenuating intracellular oxidative stress *via* inhibition of NO and H₂O₂ production and reduction of pro-inflammatory cytokine generation in murine macrophages.⁵ Recently maslinic acid has been found to inhibit the spread of the HIV virus by inhibiting the replication of a primary HIV-1 isolate as well as decreased the cytopathic effect and p24 antigen levels in MT2 cells.⁶

References

1. He, X. and Liu, R.H. *J. Agric. Food Chem.* **55**, 4366-4370 (2007).
2. Juan, M.E., Wenzel, U., Ruiz-Gutierrez, V., et al. *J. Nutr.* **136**, 2553-2557 (2006).
3. Martín, R., Carvalho, J., Ibeas, E., et al. *Cancer Res.* **67(8)**, 3741-3751 (2007).
4. Wang, Y.-F., Lai, G.-F., Efferth, T., et al. *Chemistry & Biodiversity* **3**, 1023-1030 (2006).
5. Martín, A.M., De La Puerta Vázquez, R., Fernández-Arche, A., et al. *Free Radic. Res.* **40(3)**, 295-302 (2006).
6. García, A. Online article, Universidad de Granada, *Science Daily*, <http://www.sciencedaily.com/releases/2007/07/070709111536.htm>, 070709111536, **1** (2007).

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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