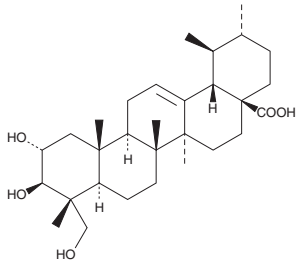
PRODUCT INFORMATION

Asiatic Acid

Item No. 11818

CAS Registry No.: 464-92-6
Formal Name: (4α)-2α,3β,23-trihydroxy-urs-12-en-28-oic acid
Synonyms: Dammarolic Acid, NSC 166063
MF: $C_{30}H_{48}O_5$
FW: 488.7
Purity: ≥95%
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

Asiatic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the asiatic acid in the solvent of choice, which should be purged with an inert gas. Asiatic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of asiatic acid in ethanol is approximately 10 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Asiatic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, asiatic acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Asiatic acid has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Asiatic acid is a pentacyclic triterpene isolated from a variety of plants, including *C. asiatica*, used in traditional medicines. In addition to anti-inflammatory actions, asiatic acid stimulates wound healing by increasing collagen production.[1] It has also been found to induce cell cycle arrest and apoptosis in breast cancer cells (IC_{50} = 5.9 µM for MCF-7 cells) and block angiogenesis in cells and tumors from glioblastomas.[2,3] Asiatic acid also impacts amyloid-β precursor protein processing by down regulating BACE1 while increasing ADAM10 maturation in primary rat cortical neurons.[4] In addition, it reduces neuronal damage and cognitive defects resulting from glutamate administration *in vivo* in mice while demonstrating protective effects against glutamate-induced apoptosis in isolated SH-SY5Y cells.[5]

References

1. Maquart, F.X., Chastang, F., Simeon, A., *et al. Eur. J. Dermatol.* **9(4)**, 289-296 (1999).
2. Hsu, Y.-L., Kuo, P.-L., Lin, L.-T., *et al. J. Pharmacol. Exp. Ther.* **313(1)**, 333-344 (2005).
3. Kavitha, C.V., Agarwal, C., Agarwal, R., *et al. PLoS One* **6(8)**, (2011).
4. Patil, S.P., Maki, S., Khedkar, S.A., *et al. J. Nat. Prod.* **73(7)**, 1196-1202 (2010).
5. Xu, M.F., Xiong, Y.Y., Liu, J.K., *et al. Acta. Pharmacol. Sin.* **33**, 578-587 (2012).

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