

## Asiatic acid Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)

### [ Product Information ]

**Name:** Asiatic acid

**Catalog No.:** CFN98688

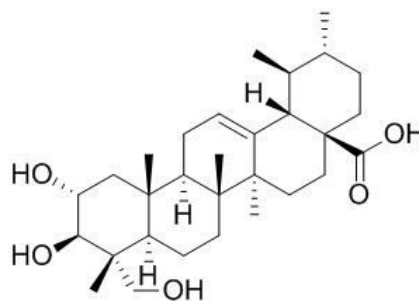
**Cas No.:** 464-92-6

**Purity:** > 98%

**M.F:** C<sub>30</sub>H<sub>48</sub>O<sub>5</sub>

**M.W:** 488.7

**Physical Description:** Powder



**Synonyms:** (1S,2R,4aS,6aR,6aS,6bR,8aR,9R,10R,11R,12aR,14bS)-10,11-dihydroxy-9-(hydroxymethyl)-1,2,6a,6b,9,12a-hexamethyl-2,3,4,5,6,6a,7,8,8a,10,11,12,13,14b-tetradecahydro-1H-picene-4a-carboxylic acid.

### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Ingredient in supplements, beverages;
7. Others.

### [ Source ]

The herbs of *Centella asiatica*.

### **[ Biological Activity or Inhibitors ]**

Asiatic acid (AA) is a pentacyclic triterpene contained in medicinal plants, can be used as an agent for increasing sensitivity of colon cancer cells to treatment with CPT-11 or as an agent for reducing adverse effects of CPT-11.<sup>[1]</sup>

Asiatic acid has been reported to induce apoptosis of various human cancer cells, it may exert anti-tumorigenesis through inhibitory actions in NO and COX-2 signals.<sup>[2]</sup>

Asiatic acid ameliorates dextran sulfate sodium-induced murine experimental colitis via suppressing mitochondria-mediated NLRP3 inflammasome activation, its potential usage in the treatment of inflammatory bowel disease.<sup>[3]</sup>

Asiatic acid shows antidiabetic and antihyperlipidemic activity in diabetic rats.<sup>[4]</sup>

Asiatic acid has anti-inflammatory and antioxidant effects, it inhibits LPS-induced ALI in mice by inhibiting inflammatory cytokine production, which is mediated via blocking of the TLR4/NF-kB signaling pathway.<sup>[5]</sup>

Asiatic acid can inhibit cell proliferation through regulating the expression of focal adhesion kinase in multiple myeloma cells.<sup>[6]</sup>

### **[ Solvent ]**

Pyridine, DMSO, etc.

### **[ HPLC Method ]<sup>[7]</sup>**

Mobile phase: Acetonitrile : Orthophosphoric acid buffer, gradient elution ;

Flow rate: 1.7 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 210 nm.

### **[ Storage ]**

2-8°C, Protected from air and light, refrigerate or freeze.

## **[ References ]**

- [1] Bunpo P, Kataoka K, Arimochi H, *et al. J. Med. Invest.*, 2005, 52(1-2):65-73.
- [2] Park B C, Paek S H, Lee Y S, *et al. Biol. Pharm. Bull.*, 2007, 30(1):176-9.
- [3] Guo W, Liu W, Jin B, *et al. Int. Immunopharmacol.*, 2015, 24(2):232-8.
- [4] Ramachandran V, Saravanan R, Senthilraja P. *Phytomed. Int.J. Phytother. Phytopharmacol.*, 2014, 21(3):225-32.
- [5] Li Z L, Xiao XZ, Yang M S. *Inflammation*, 2016:1-7.
- [6] Zhang J, Ai L, Lv T, *et al. Oncol. Lett.*, 2013, 6(6):1762-6.
- [7] Tiwari R K, Chanda S, Deepak M, *et al. J. Chem. Pharm. Res.*, 2010(3):223-9.

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