

## Acetyl shikonin Datasheet

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

### [ Product Information ]

**Name:** Acetyl shikonin

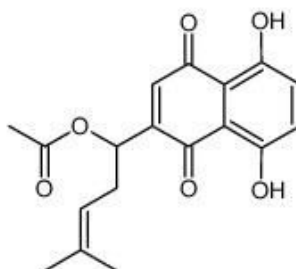
**Catalog No.:** CFN90523

**Cas No.:** 24502-78-1

**Purity:** >98%

**M.F:** C<sub>18</sub>H<sub>18</sub>O<sub>6</sub>

**M.W:** 330.33



**Physical Description:** Powder

**Synonyms:** 1,4-Naphthalenedione,2-[(1R)-1-(acetyloxy)-4-methyl-3-penten-1-yl]-5,8-dihydroxy-

### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Others.

### [ Source ]

The roots of *Lithosperma erythrorhizon* Sieb. et Zucc.

### [ Biological Activity or Inhibitors ]

Acetylshikonin is one naphthoquinone derivative isolated from the *Lithospermum erythrorhizon*, exhibits weak cytotoxicity against human umbilical vein endothelial cells (HUVECs) with IC<sub>50</sub> of over 20 µM, exhibits the antiangiogenic and antitumorogenic effects by suppressing proliferation and angiogenic factors.<sup>[1]</sup>

Acetylshikonin inhibits the generation of NADPH oxidase complex in the activation of respiratory burst of PMNs, but does not directly inhibit the activity of NADPH oxidase already generated.<sup>[2]</sup>

Certain shikonin derivatives (such as Acetyl shikonin) act as modulators of the Nur77-mediated apoptotic pathway and identify a new shikonin-based lead that targets Nur77 for apoptosis induction. <sup>[3]</sup>

Acetylshikonin, shikonin, and alkannin have accelerative effect on the proliferation of granulation tissue in rats.<sup>[4]</sup>

Acetylshikonin isolated from *Arnebia euchroma* (Royle) Johnston cell suspension cultures exhibits specific in vivo and in vitro antitumor effects.<sup>[5]</sup>

Acetylshikonin has inhibitory effect on the edematous response is due neither to the release of steroid hormones from the adrenal gland nor to the glucocorticoid activity, but probably partly to the suppression of mast cell degranulation and partly to protection of the vasculature from mediator challenge.<sup>[6]</sup>

Acetylshikonin induces apoptosis of hepatitis B virus X protein-expressing human hepatocellular carcinoma cells via endoplasmic reticulum stress.<sup>[7]</sup>

## **[ Solvent ]**

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

## **[ HPLC Method ]<sup>[8]</sup>**

Mobile phase: Acetonitril-Methanol-2% Acetic acid H<sub>2</sub>O= 60:20:20;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 525 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Lee H J, Lee H J, Magesh V, *et al. Yakugaku Zasshi.*, 2008, 128(11):1681-8.
- [2] Kawakami N, Koyama Y, Tanaka J, *et al. Biol.Pharmaceut. Bull.*, 1996, 19(10):1266-70.
- [3] Liu J, Zhou W, Li S S, *et al. Cancer Res.*, 2008, 68(21):8871-80.
- [4] Ozaki Y, Ohno A, Saito Y, *et al. Biol. Pharmaceut. Bull.*, 1994, 17(8):1075-7.
- [5] Wang J P, Tsao L T, Raung S L, *et al. Brit.J. Pharmacol.*, 1997, 121(3):409-16.
- [6] Wang J P, Raung S L, Chang L C, *et al. Eur. J. Pharmacol.*, 1995, 272(272):87-95.
- [7] Moon J, Sang S K, Malilas W, *et al. Eur. J. Pharmacol.*, 2014, 735(1):132-40.
- [8] Ozgen U, Ozturk M, Atila A, *et al. Planta Med.*, 2007, 73(9):883-883.

## **[ Contact ]**

**Address:**

S5-3 Building, No. 111, Dongfeng Rd.,  
Wuhan Economic and Technological Development Zone,  
Wuhan, Hubei 430056,  
China

**Email:** [info@chemfaces.com](mailto:info@chemfaces.com)

**Tel:** +86-27-84237783

**Fax:** +86-27-84254680

**Web:** [www.chemfaces.com](http://www.chemfaces.com)

**Tech Support:** [service@chemfaces.com](mailto:service@chemfaces.com)