**Natural Products** 



# **Acteoside Datasheet**

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

### [ Product Information ]

Name: Acteoside

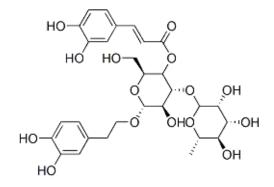
Catalog No.: CFN97048

Cas No.: 61276-17-3

**Purity:** >=98%

 $\textbf{M.F:} C_{29}H_{36}O_{15}$ 

M.W: 624.59



Physical Description: Powder

**Synonyms:**2-(3,4-dihydroxyphenyl)ethyl-3-O-(6-deoxyhexopyranosyl)-4-O-[3-(3,4-dihydr oxyphenyl)acryloyl]hexopyranoside; verbascoside.

## [ Intended Use ]

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

## [Source]

The herbs of Cistanche deserticola Y.C. Ma.

## [Biological Activity or Inhibitors]

Acteoside is the most abundant and major active component of Ligustrum purpurascens (kudingcha tea), it is a lipase inhibitor, has anti-obesity properties.<sup>[1]</sup>

Acteoside has protective effects against the carbon tetrachloride-induced hepatotoxicity, the mechanisms possibly related to its ability to block the P450-mediated carbon tetrachloride bioactivation and free radical scavenging effects; it can inhibit apoptosis in D-galactosamine and lipopolysaccharide-induced liver injury.<sup>[2,3]</sup>

Acteoside inhibits human promyelocytic HL-60 leukemia cell proliferation via inducing cell cycle arrest at G0/G1 phase and differentiation into monocyte.<sup>[4]</sup>

Acteoside significantly inhibits arachidonic acid release and prostaglandin E2 production induced by 0.5 microM melittin, it is possible that acteoside may be developed as an anti-inflammatory agent.<sup>[5]</sup>

Acteoside can protect SH-SY5Y cells against  $\beta$  -amyloid-induced cell injury by the attenuating ROS production and the modulating apoptotic signal pathway through Bcl-2 family, cytochrome c , and caspase-3.<sup>[6]</sup>

Acteoside and martynoside exhibit anticancer, cytotoxic and antimetastatic activities; its antiproliferative effect on endometrial cells suggests that martynoside may be an important natural SERM; acteoside is an antiestrogen in breast cancer cells and osteoblasts, without any effect on endometrial cells.<sup>[7]</sup>

Acteoside and its analogs have antioxidant and antihypertensive activities, it is a new antihypertensive drug.<sup>[8,9]</sup>

Acteoside has analgesic activity, it as the Analgesic Principle of Cedron (Lippia hriphylla), a Peruvian Medicinal Plant.<sup>[10]</sup>

#### [Solvent]

Pyridine, Methanol, Ethanol, etc.

#### [ HPLC Method ]<sup>[11]</sup>.

Mobile phase: Acetonitrile -0.1% Acetic acid H2O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 334 nm.

## [Storage]

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

## [References]

[1] Wu X, He W, Zhang H, et al. Food Chem., 2014, 142(1):306-10.

[2] Lee K J, Woo E R, Choi C Y, et al. Life Sci., 2004, 74(8):1051-64.

[3] Xiong Q, Hase K, Tezuka Y, et al. Life Sci., 1999, 65(4):421-30.

[4] Lee K W, Kim H J, Lee Y S, et al. Carcinogenesis, 2007, 28(9):1928-36.

[5] Lee J H, Lee J Y, Kang H S, et al. Arch. Pharm. Res., 2006, 29(6):508-13.

[6] Wang H G, Xu Y X, Yan J, et al. Brain Res., 2009, 1283:139-47.

[7]Papoutsi Z, Kassi E, Mitakou S, et al. J. Steroid Biochem., 2006, 98(1):63-71.

[8] Mansoor A, Rizwani G H, Khalid A, et al. Phytother. Res., 2006, 9(7):525-7.

[9] Chen C H, Lin Y S, Meiyin C, et al. Bot. Stud., 2012, 53(4):421-9.

[10] Nakamura T, Okuyama E, Tsukada A, et al. Chem. Pharm. Bull., 1997, 45(3):499-504.

[11] Li H, Chou G X, Wang Z T, et al. China Journal of Chinese Materia Medica, 2006, 31(10):822-4.

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