

## Ursolic acid Datasheet

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

### [ Product Information ]

**Name:** Ursolic acid

**Catalog No.:** CFN97259

**Cas No.:** 77-52-1

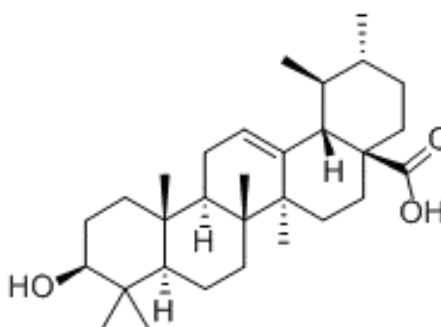
**Purity:** > 98%

**M.F:** C<sub>30</sub>H<sub>48</sub>O<sub>3</sub>

**M.W:** 456.70

**Physical Description:** Powder

**Synonyms:** 3beta-Hydroxyurs-12-en-28-oic acid.



### [ Intended Use ]

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

### [ Source ]

The herbs of *Rhododendron cephalanthum* Franch.

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

Ursolic acid has anti-tumor, anti-inflammatory, antimicrobial activities, and anti-asthmatic effects; it is a potential PPAR  $\gamma$  agonist, can suppress ovalbumin-induced airway inflammation and Penh by down-regulating IL-5, IL-13, and IL-17 in a mouse model of allergic asthma.<sup>[1]</sup>

Ursolic acid and carnosol have inhibition of skin tumorigenesis.<sup>[2]</sup>

Ursolic acid has an antioxidant activity, it can ameliorate cognition deficits and attenuates oxidative damage in the brain of senescent mice induced by D-galactose, it may offer a novel therapeutic strategy for the treatment of age-related conditions. <sup>[3]</sup>

Ursolic acid has antihyperlipidemic, hypoglycemic and direct cardiac effect, its antihypertensive effect is attributed to its potent diuretic-natriuretic-saluretic activity.<sup>[4]</sup>

Ursolic acid inhibits IkappaB $\alpha$  kinase and p65 phosphorylation, leading to the suppression of NF-kappaB activation induced by various carcinogens, these actions of ursolic acid may mediate its antitumorigenic and chemosensitizing effects.<sup>[5]</sup>

Ursolic acid is a potent inhibitor of proliferation and inducer of apoptosis in both KRAS and BRAF mutated human colorectal cancer cells.<sup>[6]</sup>

## **[ Solvent ]**

Dioxane, Pyridine, Methanol, Ethanol, Butanol, Methyl ethyl ketone, etc.

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

Mobile phase: Methanol - 0.03 M Phosphate buffer (pH 2.8) = 88:12 ;

Flow rate: 1.0 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] Kim S H, Hong J H, Lee Y C. *Eur. J. Pharmacol.*, 2013, 701(1-3):131-43.
- [2] Huang M T, Ho C T, Wang Z Y, *et al. Cancer Res.*, 1994, 54(3):701-8.
- [3] Lu J, Zheng Y L, Wu D M, *et al. Biochem. Pharmacol.*, 2007, 74(7):1078-90.
- [4] Somova L O, Nadar A, Rammanan P, *et al. Phytomedicine*, 2003, 10(2-3):115-21.
- [5] Shishodia S, Majumdar S, Banerjee S, *et al. Cancer Res.*, 2003, 63(15):4375-83.
- [6] Xavier C P, Lima C A. *Cancer Lett.*, 2009, 281(2):162-70.
- [7] Zhou C, Chen K, Sun C, *et al. Biomed. Chromatogr.*, 2007, 21(7):755-61.

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