

## Nobiletin Datasheet

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

### [ Product Information ]

**Name:** Nobiletin

**Catalog No.:** CFN98726

**Cas No.:** 478-01-3

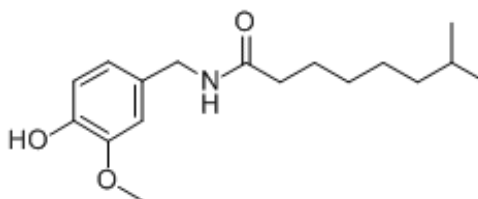
**Purity:** >=98%

**M.F:** C<sub>21</sub>H<sub>22</sub>O<sub>8</sub>

**M.W:** 402.39

**Physical Description:** Powder

**Synonyms:** 1,3,3-Trimethyl-2-oxabicyclo[2.2.2]octane; 1,8-Cineole; Eucalyptol;  
1,8-Epoxy-p-menthane; 1,8-Oxido-p-menthane.



### [ Intended Use ]

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

### [ Source ]

The peel of *Citrus nobilis* Lour.

### [ Biological Activity or Inhibitors ]

Nobiletin, a citrus polymethoxy flavonoid, has anti-inflammatory actions on human synovial fibroblasts and mouse macrophages.<sup>[1]</sup>

Nobiletin has an inhibitory effect on phorbol ester-induced skin inflammation, oxidative stress, and tumor promotion in mice; it is a functionally novel and possible chemopreventive agent in inflammation-associated tumorigenesis.<sup>[2]</sup>

Nobiletin decreases the Aβ burden and plaques in the hippocampus of APP-SL 7-5 Tg mice; it improves memory impairment and Aβ pathology in a transgenic mouse model of Alzheimer's disease.<sup>[3]</sup>

Nobiletin has anti-tumor effects and antiproliferative effects via induction of apoptosis and cell cycle deregulation.<sup>[4]</sup>

Nobiletin exhibits various pharmacological effects including anti-inflammatory, antitumor and neuroprotective properties; it improves hyperglycemia and insulin resistance in obese diabetic ob/ob mice.<sup>[5]</sup>

Nobiletin improves brain ischemia-induced learning and memory deficits through stimulation of CaMKII and CREB phosphorylation.<sup>[6]</sup>

## **[ Solvent ]**

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

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

Mobile phase: Acetonitrile - H<sub>2</sub>O=45:55 ;

Flow rate: 1.0 ml/min;

Column temperature: 25 °C;

The wave length of determination: 333 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Lin N, Sato T, Takayama Y, *et al. Biochem. Pharmacol.*, 2003, 65(12):2065-71.
- [2] Murakami A, Nakamura Y, Torikai K, *et al. Cancer Res.*, 2000, 60(18):5059-66.
- [3] Onozuka H, Nakajima A, Matsuzaki K, *et al. J. Pharmacol. Exp. Ther.*, 2008, 326(3):739-44.
- [4] Yoshimizu N, Otani Y, Saikawa Y, *et al. Aliment. Pharm. Therap.*, 2004, 20 Suppl 1(Supplement s1):95-101.
- [5] Lee Y S, Cha B K, Yamakawa H, *et al. Biochem. Pharmacol.*, 2010, 79(11):1674-83.
- [6] Yamamoto Y, Shioda N, Feng H, *et al. Brain Res.* 2009, 1295:218-29.
- [7] Luo X, Weifeng L I, Niu X, *et al. Northwest Pharmaceutical Journal*, 2014(2):140-2.

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