

## Ligustilide Datasheet

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

### [ Product Information ]

**Name:** Ligustilide

**Catalog No.:** CFN99932

**Cas No.:** 4431-01-0

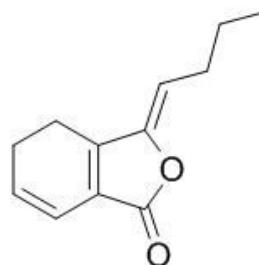
**Purity:** > 98%

**M.F:** C<sub>12</sub>H<sub>14</sub>O<sub>2</sub>

**M.W:** 190.24

**Physical Description:** Oil

**Synonyms:** (3Z)-3-butylidene-4,5-dihydroisobenzofuran-1-one.



### [ Intended Use ]

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

### [ Source ]

The roots of *Angelica sinensis* (Oliv.) Diels.

### [ Biological Activity or Inhibitors ]

Ligustilide and senkyunolide A, two of the most abundant Ligusticum chuanxiong constituents, have vasorelaxation activities in contractions to various contractile agents in rat isolated aorta. [1]

Ligustilide, one of the main compounds of Danggui essential oil, possesses antinociceptive and anti-inflammatory activities, also has an active dilatory effect on myometrium and an effective role in reducing the neurogenic and inflammatory pain, thus it has the potential to be developed into an effective drug for the treatment of various pain syndromes including primary dysmenorrhoea.[2]

Ligustilide exhibits anti-inflammatory activities by blocking the activation of MAPKs/IKK and the downstream transcription factors AP-1 and NF- $\kappa$ B, which may result from ligustilide's down-regulation of iROS production.[3]

Ligustilide has therapeutic effect against (AD)-like neuropathologies, it upregulates Klotho expression in the cerebral choroid plexus and serum, decreases and Forkhead box class O1 and inhibits the -like growth factor 1 pathway and induces Forkhead box class O1 activation in 293T cells along with Klotho upregulation, suggests that Klotho might be a novel therapeutic target for age-related AD, and Klotho upregulation might contribute to the neuroprotective effect of ligustilide against AD.[4]

## **[ Solvent ]**

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

## **[ HPLC Method ]**<sup>[5]</sup>

Mobile phase: Methanol-0.1%Glacial acetic acid H<sub>2</sub>O=65:35;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 320 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Chan S, Cheng T G. *J. Ethnopharmacol.*, 2007, 111(3):677-80.
- [2] Du J, Yu Y, Ke Y, et al. *J. Ethnopharmacol.*, 2007, 112(1):211-4.
- [3] Su Y W, Chiou W F, Chao S H, et al. *Int. Immunopharmacol.*, 2011, 11(9):1166-72.
- [4] Kuang X, Chen Y S, Wang L F, et al. *Neurobiol.Aging*, 2014, 35(1):169-78.
- [5] Lv W, Wu L, Ye N, et al. *Pharmacy & Clinics of Chinese Materia Medica*, 2014, 5(2):13-5.

## **[ 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)