

## Nuciferine Datasheet

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

### [ Product Information ]

**Name:** Nuciferine

**Catalog No.:** CFN99733

**Cas No.:** 475-83-2

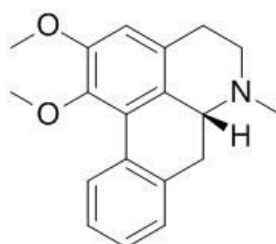
**Purity:** >=98%

**M.F:** C<sub>19</sub>H<sub>21</sub>NO<sub>2</sub>

**M.W:** 295.38

**Physical Description:** White powder

**Synonyms:**(-)-Nuciferine;(r)-1,2-Dimethoxyaporphine;1,2-dimethoxy-6a-beta-aporphin;  
5,6,6a,7-tetrahydro-1,2-dimethoxy-6-methyl-g)quinolin(r)-4h-dibenzo(d;l-5,6-dimethoxyap  
orphine;L-Nuciferine;Nuciferin.



### [ Intended Use ]

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

### [ Source ]

The leaves of *Nelumbo nucifera*.

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

Nuciferine, extracted from *Nelumbo nucifera*, can stimulate both phases of insulin secretion in isolated islets by closing potassium-adenosine triphosphate channels, explaining anti-diabetic effects of *Nelumbo nucifera*.<sup>[1]</sup>

(--)-Nuciferine may be used as a systemically effective, rather selective blocker of central glutamate receptors.<sup>[2]</sup>

Nuciferine is a major active aporphine alkaloid from the leaves of *N. nucifera* Gaertn that possesses anti-hyperlipidemia, anti-hypotensive, anti-arrhythmic, and insulin secretagogue activities; nuciferine supplementation can ameliorate HFD-induced dyslipidemia as well as liver steatosis and injury, the beneficial effects of nuciferine are associated with altered expression of hepatic genes involved in lipid metabolism.<sup>[3]</sup>

Nuciferine downregulates Per-Arnt-Sim kinase expression during its alleviation of lipogenesis and inflammation on oleic acid-induced hepatic steatosis in HepG2 cells, it may be a potential therapeutic treatment for Non-alcoholic fatty liver disease (NAFLD).<sup>[4]</sup>

Nuciferine inhibits tumor-promoting effect of nicotine involving Wnt/ $\beta$ -catenin signaling in non-small cell lung cancer, it presents a potential novel alternative to NSCLC prevention and therapy.<sup>[5]</sup>

Nuciferine can restore potassium oxonate-induced hyperuricemia and kidney inflammation in mice, suggests that a dietary supplement of nuciferine rich in lotus leaf may be potential for the prevention and treatment of hyperuricemia with kidney inflammation.<sup>[6]</sup>

## **[ Solvent ]**

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

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

Mobile phase: Acetonitrile- 0.1% Triethylamine H<sub>2</sub>O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 35 °C;

The wave length of determination: 270 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Nguyen K H, Ta T N, Pham T H M, *et al. J. Ethnopharmacol.*, 2012, 142(2):488-95.
- [2] Polc P, Haefely W. *Archiv Für Experimentelle Pathologie Und Pharmakologie*, 1977, 300(3):199-203.
- [3] Guo F, Yang X, Li X, *et al. Plos One*, 2013, 8(5):e63770.
- [4] Zhang D D, Zhang J G, Wu X, *et al. Front. Pharmacol.*, 2015, 6:238.
- [5] Liu W, Yi D D, Guo J L, *et al. J. Ethnopharmacol.*, 2015, 165:83–93.
- [6] Wang M X, Liu Y L, Ying Y, *et al. Eur. J.Pharmacol.*, 2014, 747C:59-70.
- [7] Wang Y X. *China Journal of Chinese Materia Medica*, 2008, 33(14):1713-6.

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