

## Germacrone Datasheet

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

### [ Product Information ]

**Name:** Germacrone

**Catalog No.:** CFN98133

**Cas No.:** 6902-91-6

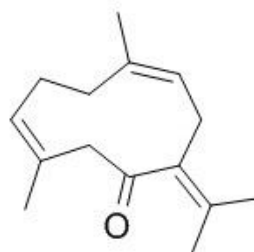
**Purity:** > 98%

**M.F:** C<sub>15</sub>H<sub>22</sub>O

**M.W:** 218.34

**Physical Description:** Cryst.

**Synonyms:** 3,7-Dimethyl-10-propan-2-ylidene-1-cyclodeca-3,7-dienone.



### [ Intended Use ]

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

### [ Source ]

The rhizoma of *Curcuma wenyujin*.

### [ Biological Activity or Inhibitors ]

Germacrone, a natural product isolated from *Rhizoma curcuma*, can inhibit the proliferation of breast cancer cell lines by inducing cell cycle arrest and apoptosis through mitochondria-mediated caspase pathway. <sup>[1]</sup>

Germacrone moderately inhibits CYP2B6 and CYP3A4 activities in vitro, with IC50 values below 10  $\mu$ M, and produces two oxidized metabolites and four glutathione conjugates. <sup>[2]</sup>

Germacrone has anti-tumor activity against liver cancer via regulating the expression of proteins related to G2/M cell cycle and apoptosis, and p53 and oxidative damage may play important roles in the inhibition of human hepatoma cells growth by germacrone. <sup>[3]</sup>

Germacrone shows antiviral activity against the H1N1 and H3N2 influenza A viruses and the influenza B virus in a dose-dependent manner, exerts an effective protection of mice from lethal infection and reduces the virus titres in the lung, it could as a therapeutic agent alone or in combination with other agents for the treatment of influenza virus infection. <sup>[4]</sup>

### **[ Solvent ]**

Chloroform, Dichloromethane, Ethyl Acetate, Acetone, etc.

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

Mobile phase: Methanol : H<sub>2</sub>O=80:20 ;

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] Zhong Z, Chen X, Tan W, *et al. Eur .J. Pharmacol.*, 2011, 667(1-3):50-5.

[2] Pimkaew P, Küblbeck J, Petsalo A, *et al. Toxicol. In Vitro*, 2013, 27(6):2005-12.

[3] Liu Y, Wang W, Fang B, *et al. Eur. J. Pharmacol.*, 2012, 698(1-3):95-102.

[4] Liao Q, Qian Z, Liu R, *et al. Antivir Res.*, 2013, 100(3):578-88.

[5] Tai C, Zhong Z, Zhang Q. *Drug Standards of China*, 2012, 13(2):93-5.

## **[ Contact ]**

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