

## Aristolochic acid Datasheet

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

### [ Product Information ]

**Name:** Aristolochic acid

**Catalog No.:** CFN99505

**Cas No.:** 313-67-7

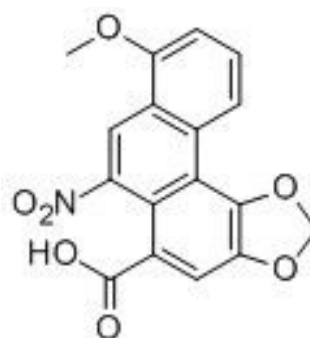
**Purity:** > 98%

**M.F:** C<sub>17</sub>H<sub>11</sub>O<sub>7</sub>N

**M.W:** 341.27

**Physical Description:** White powder

**Synonyms:** 8-Methoxy-6-nitro-5-naphtho[2,1-g][1,3]benzodioxolecarboxylic acid.



### [ Intended Use ]

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

### [ Source ]

The herb of *Aristolochia debilis* Sieb. et Zucc.

### [ Biological Activity or Inhibitors ]

Aristolochic acid(AA), a potent human carcinogen produced by Aristolochia plants, is associated with urothelial carcinoma of the upper urinary tract (UUC), exposure to aristolochic acid contributes significantly to the incidence of UUC in Taiwan and endemic (Balkan) nephropathy .<sup>[1]</sup>

DNA damage by aristolochic acid is not only responsible for the tumour development but also for the destructive fibrotic process in the kidney; AA is a powerful nephrotoxic and carcinogenic substance with an extremely short latency period, not only in animals but also in humans, therefore, all products containing botanicals known to or suspected of containing AA should be banned from the market world wide.<sup>[2,3]</sup>

Aristolochic acid can induce proximal tubule apoptosis and epithelial to mesenchymal transformation.<sup>[4]</sup>

Aristolochic acid induces tumors in rats and mice, activates mutations at codon 61 of the c-Ha- ras gene in thin-tissue sections of tumors. <sup>[5]</sup>

### **[ Solvent ]**

Pyridine, DMSO, Ethanol, Methanol.

### **[ HPLC Method ]<sup>[6]</sup>**

Mobile phase: Methanol- H<sub>2</sub>O-Acetic acid = 72:27:1;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 250 nm..

### **[ Storage ]**

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

### **[ References ]**

[1] Chen C H, Dickman K G, Moriya M, *et al. P. Nat. Acad. Sci. U.S. A., 2012, 109(21): 8241-6.*

[2] Grollman A P, Shibutani S, Moriya M, *et al.* *P. Natl. Acad. Sci. U.S.A.*, 2007, 104(29): 12129-34.

[3] Arlt V M, Stiborova M, Schmeiser H H. *Mutagenesis*, 2002, 17(4):265-77.

[4] Pozdzik A A, Salmon I J, Debelle F D, *et al.* *Kidney International*, 2008, 73(5):595-607.

[5] Schmeiser H H, Scherf H R, Wiessler M. *Cancer Lett.*, 1991, 59(2):139-43.

[6] Zhu G, Wang Z, Wang Q, *et al.* *China Pharmacy*, 2006, 17(18):21-4.

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