

## Adenanthin Datasheet

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

### [ Product Information ]

**Name:** Adenanthin

**Catalog No.:** CFN99215

**Cas No.:** 111917-59-0

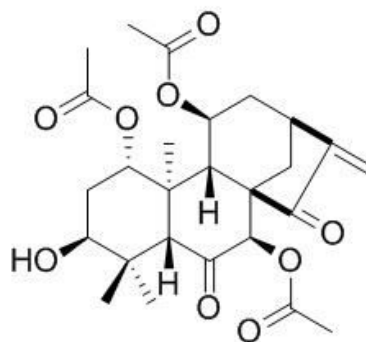
**Purity:** > 98%

**M.F:** C<sub>26</sub>H<sub>34</sub>O<sub>9</sub>

**M.W:** 490.6

**Physical Description:** Powder

**Synonyms:** Actinodephnine; Acuminatoside.



### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Synthetic precursor compounds;
5. Others.

### [ Source ]

The herb of *Rabdosia adenantha*.

### [ Biological Activity or Inhibitors ]

Adenanthin, a diterpenoid isolated from the leaves of *Rabdosia adenantha*, induces

differentiation of acute promyelocytic leukemia (APL) cells, it can serve as what is to our knowledge the first lead natural compound for the development of Prx I –and Prx II –targeted therapeutic agents, which may represent a promising approach to inducing differentiation of APL cells.<sup>[1]</sup>

Adenanthin can represses tumor growth and prolongs survival in mouse promyelocytic leukemia models, but it is not a specific Prx inhibitor, and its reported antitumor and anti-inflammatory effects are more likely to involve more general inhibition of thioredoxin and/or glutathione redox pathways.<sup>[2]</sup>

Adenanthin, a new inhibitor of thiol-dependent antioxidant enzymes, impairs the effector functions of human natural killer cells.<sup>[3]</sup>

Adenanthin can induces monocytic differentiation of the ATRA-sensitive and-resistant leukemic cells through MEK/ERK2/C/EBP $\beta$  pathway.<sup>[4]</sup>

Adenanthin inhibits the expression of telomerase through Prdx I and contributes to the death of cells.<sup>[5]</sup>

## **[ Solvent ]**

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Ethyl ether.

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

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

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 243 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Wu Y L, Pu J X, Liu W, *et al. Nat. Chem. Biol.*, 2012, 8(5):486-93.
- [2] Soethoudt M, Peskin A V, Dickerhof N, *et al. Free Radical Bio. Med.*, 2014, 77:331-9.
- [3] Marta Siernicka , Magdalena Winiarska, Bajor M, *et al. Immunology*, 2015, 146(1): 173-83.
- [4]Liu Z X. *China Pathophysiology receptors, tumor immunity and Professional Committee Joint Conference Papers Series*, 2010.
- [5] Cui J Y, Cao Y, Lei H, *et al. J. Shanghai Jiaotong University*, 2015, 35(1).
- [6] Bei J, Yang H, Li M L, *et al. J. Nat. Prod.*, 2002, 65(8):1111-6.

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