**Natural Products** 



# **Cucurbitacin D Datasheet**

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

#### [ Product Information ]

Name: Cucurbitacin D

Catalog No.: CFN90209

Cas No.: 3877-86-9

**Purity:** >=98%

**M.F:** C<sub>32</sub>H<sub>44</sub>O<sub>7</sub>

**M.W:** 516.67

Physical Description: Powder

**Synonyms:** (9β,10α,23E)-2β,16α,20,25-Tetrahydroxy-9-methyl-19-norlanosta-

5,23-diene-3,11,22-trione.

#### [ Intended Use ]

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

#### [Source]

The rhizomes of Hemsleya amabilis Diels.

#### [Biological Activity or Inhibitors]

Cucurbitacin D, isolated from the extract of trichosanthes, can induce apoptosis through caspase-3 and phosphorylation of JNK in hepatocellular carcinoma cells, suggests that it could be a valuable candidate for anti-tumor drug.<sup>[1]</sup>

Cucurbitacin D may be a potential therapeutic agent for  $\beta$ -hemoglobinopathies, including sickle cell anemia and  $\beta$ -thalassemia.<sup>[2]</sup>

Cucurbitacin D is a new inflammasome activator in macrophages, it can initiate immunomodulating activity in macrophages to lead to inflammasome activation as well as enhancement of LPS signaling. <sup>[3]</sup>

Cucurbitacin D induces cell cycle arrest and apoptosis by inhibiting STAT3 and NF-κB signaling in doxorubicin-resistant human breast carcinoma (MCF7/ADR) cells, it ould be used as a useful compound to treat adriamycin-resistant patients.<sup>[4]</sup>

#### [Solvent]

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

#### [ HPLC Method ]<sup>[1]</sup>

Mobile phase: Acetonitrile- 0.1% Trifluoroacetic ,gradient elution ; Flow rate: 0.5 ml/min; Column temperature: Room Temperature; The wave length of determination: 230 nm.

### [Storage]

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

#### [ References ]

[1] Takahashi N, Yoshida Y, Sugiura T, et al. Int. Immunopharmacol., 2009, 9(4):508-13.

- [2] Kan L, Xing H, Zhang S, et al. Blood Cell. Mol. Dis., 2010, 45(4):269-75.
- [3] Song Y, Ding N, Kanazawa T, et al. Int. Immunopharmacol., 2013, 17(4):1044-50.

[4] Jin M K, Kim S R, Hong S H, et al. Mol.Cell. Biochem., 2015, 409(1-2):33-43.

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