Natural Products

ChemFaces

Bruceine D Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Bruceine D

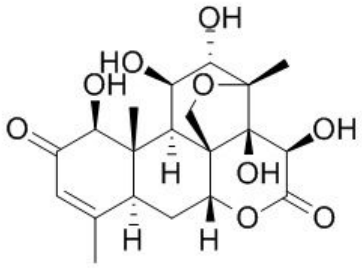
Catalog No.: CFN90771

Cas No.: 21499-66-1

Purity: >=98%

M.F: $C_{20}H_{26}O_9$

M.W: 410.4



Physical Description: Powder

Synonyms:(1beta,11beta,12alpha,15beta)-13,20-Epoxy-1,11,12,14,15-pentahydroxypicras-3-ene-2,16-dione.

[Intended Use]

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

[Source]

The barks of *Ailanthus altissima.*

[Biological Activity or Inhibitors]

Bruceine A and bruceine D from Brucea javanica have anthelmintic activity against *Dactylogyrus intermedius (Monogenea) in goldfish (Carassius auratus)* with EC(50) values of 0.49 mg l(-1) and 0.57 mg l(-1), respectively.[1]

Bruceine D can induce apoptosis in pancreatic adenocarcinoma cell line PANC-1 through the activation of p38-mitogen activated protein kinase, it is a promising chemical candidate for further development into anti-pancreatic cancer agent.[2]

Bruceine D induces cytotoxicity in Capan-2 cells via the induction of cellular apoptosis involving the mitochondrial pathway. [3]

Bruceine D has the ability to induce the systemic resistance on tobacco against Tobacco Mosaic Virus (TMV) infection, and also can protect the virus infected host.[4]

Bruceine D can induce apoptosis in human chronic myeloid leukemia K562 cells via mitochondrial pathway.[5]

[Solvent]

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

[HPLC Method][6]

Mobile phase: Methanol -H2O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 30 ℃;

The wave length of determination: 270 nm.

[Storage]

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

[References]

[1] Wang Y, Wu Z F, Wang G X, *et al. Vet. Parasitol., 2011, 177(1-2):127-33.*

[2] Lau S T, Lin Z X, Liao Y, *et al. Cancer Lett., 2009, 281(1):42-52.*

[3] Liu L, Lin Z X, Leung P S, *et al. Int. J. Mol. Med., 2012, 30(1):93-9.*

[4] Zhang Z, Shen J, Xie L, *et al. Science & Technology Review, 2008, 26(8):31-6.*

[5] Zhang J Y, Lin M T, Tung H Y, *et al. Am. J. Cancer Res., 2016, 6(4):819-26.*

[6] Zhou Z, Shi R, Liu B, *et al. China Journal of Chinese Materia Medica, 2011, 36(14):1979-81.*

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