Natural Products

ChemFaces

Chelerythrine Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Chelerythrine

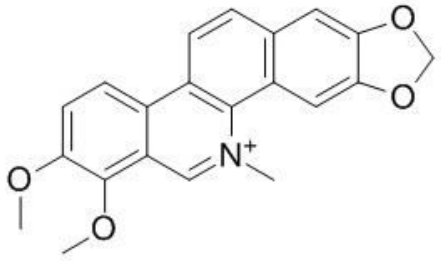
Catalog No.: CFN98449

Cas No.: 34316-15-9

Purity: > 98%

M.F: $C_{21}H_{18}NO_4$

M.W: 348.4



Physical Description: Yellow powder

Synonyms:1,2-Dimethoxy-12-methyl[1,3]benzodioxolo[5,6-c]phenanthridinium(1+);

7,8-Dimethoxy-10-methyl-2',3'-methylenedioxy-1,2-benzophenanthridinium(1+);

Toddaline.

[Intended Use]

1. Reference standards;

2. Pharmacological research;

3. Food and cosmetic research;

4. Synthetic precursor compounds;

5. Others.

[Source]

The roots of *Toddalia asiatica.*

[Biological Activity or Inhibitors]

Chelerythrine is a potent specific inhibitor of protein kinase C(PKC), it selectively inhibits PKC compared to tyrosine protein kinase, cAMP-dependent protein kinase and calcium/calmodulin-dependent protein kinase; the potent antitumoral activity of celerythrine measured in vitro may be due at least in part to inhibition of PKC and thus suggests that PKC may be a model for rational design of antitumor drugs.[1]

Chelerythrine triggers apoptosis through a mechanism that involves direct targeting of Bcl-2 family proteins.[2]

Chelerythrine and dihydrochelerythrine affect cell cycle distribution, activate mitochondrial apoptotic pathway, and induce apoptosis and necrosis in HL-60 cells.[3]

Chelerythrine and other benzophenanthridine alkaloids can block the human P2X 7 receptor.[4]

Chelerythrine has significant cytotoxic effect, independent of p53 and androgen status, on human prostate cancer cell lines, it may be prospective natural molecules for use in the treatment of prostate cancer owing to their involvement in apoptosis and cell cycle regulation.[5]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, etc.

[HPLC Method][6]

Mobile phase: Acetonitrile-0.1%Phosphoric acid H2O=25:75 ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 270 nm.

[Storage]

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

[References]

[1] Herbert J M, Augereau J M, Gleye J, *et al. Biochem. Bioph. Res. Co., 1990, 172(3):993-9.*

[2] Chan S L, Mei C L, Tan K O, *et al. J. Biol. Chem., 2003, 278(23):20453-6.*

[3] Vrba J, Doležel P, Vičar J, *et al. Toxicol. Vitro., 2008, 22(4):1008-17.*

[4] Shemon A N, Sluyter R, Conigrave A D, *et al. Brit J. Pharmacol., 2004, 142(6):1015-9.*

[5] Malíková J, Zdařilová A, Hlobilková A, *et al. Cell Biol. Toxicol., 2006, 22(6):439-53.*

[6] Cai X A , Yang G D, Ye J T, *et al.Chinese Traditional Patent Medicine, 2001, 23(11): 824-5.*

[Contact]

Address:
S5-3 Building, No. 111, Dongfeng Rd.,
Wuhan Economic and Technological Development Zone,
Wuhan, Hubei 430056,
China

Email: info@chemfaces.com
Tel: +86-27-84237783
Fax: +86-27-84254680
Web: www.chemfaces.com
Tech Support: service@chemfaces.com