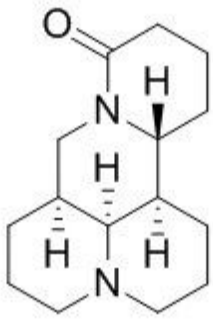
Natural Products

ChemFaces

Matrine Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Matrine

Catalog No.: CFN98835

Cas No.: 519-02-8

Purity: > 98%

M.F: $C_{15}H_{24}N_2O$

M.W: 248.4

Physical Description: Powder

Synonyms: Alpha-Matrine;(+)-Matrine;MatrineAS;Matridin-15-one; (5beta)-matridin-15-one; (5beta,6beta,7beta,11alpha)-matridin-15-one.

[Intended Use]

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

[Source]

The root of *Sophora japonica.*

[Biological Activity or Inhibitors]

Matrine, an alkaloid purified from the chinese herb Sophora flavescens Ait, is well known to possess activities including anti-inflammation, anti-fibrotic and anticancer, it could inhibit cell proliferation and induce apoptosis of SGC-7901 cells in vitro by up-regulating Fas/FasL expression and activating caspase-3 enzyme.[1]

Matrine upregulates the cell cycle protein E2F-1 and triggers apoptosis via the mitochondrial pathway in K562 cells, it is a potential anti-drug.[2]

Matrine suppresses PMA-induced MMP-1 expression through inhibition of the AP-1 signaling pathway and also may be beneficial for treatment of some inflammatory skin disorders.[3]

Matrine can induce gastric cancer MKN45 cells apoptosis via increasing pro-apoptotic molecules of Bcl-2 family, also inhibits matrix metalloproteinase-9 expression and invasion of human hepatocellular carcinoma cells.[4,5]

Matrine can improve 2,4,6-trinitrobenzene sulfonic acid (TNBS)-induced colitis in mice and the therapeutic mechanism might be related to the reduction of up-regulated colonic TNF-α production caused by TNBS.[6]

Matrine seems to be a novel autophagy inhibitor that can modulate the maturation process of lysosomal proteases.[7]

Matrine can reduce the mortality of acetaminophen overdosed mice more effectively, attenuate acetaminophen-induced hepatotoxicity, and reduces the number and area of γ-GT positive foci, thus protecting liver function and preventing HCC from occurring; it also has a protective effect on immunosuppression, a strong non-specific anti-inflammatory effect, and an effect of reducing the incidence of sodium and water retention.[8]

[Solvent]

Chloroform, Dichloromethane, DMSO, Acetone.

[HPLC Method][9]

Mobile phase: Acetontrile-Phosphate buffer solution(pH 5.5)=3:97 ;

Flow rate: 1.0 ml/min;

Column temperature: 30 ℃;

The wave length of determination: 220 nm.

[Storage]

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

[References]

[1] Dai Z J, Gao J, Ji Z Z, *et al.J. Ethnopharmacol., 2009, 123(1):91-6.*

[2] Hua J, Hou C H, Zhang S B, *et al. Eur. J. Pharmacol., 2007, 559(2-3):98-108.*

[3] Eunsun Jung , Jongsung Lee , Huh S, *et al.Biofactors, 2008, 33(2):121–8.*

[4] Luo C, Zhu Y, Jiang T, *et al. Toxicol., 2007, 229(3):245-52.*

[5] Yu H B, Zhang H F, Li D Y, *et al. J. Asian Nat. Prod. Res., 2011, 13(3):242-50.*

[6] Hong C, Bing X, Lin Z, *et al. Pharmacol .Res., 2006, 53(3):202-8.*

[7] Wang Z, Zhang J, Wang Y, *et al. Carcinogenesis, 2012, 34(1):128-38.*

[8] Wan X Y, Luo M, Li X D, *et al. Chem.-Biol. Interact., 2009, 181(1):15-9.*

[9] Jiang Y L, Zhang S Y. *Lishizhen Medicine & Materia Medica Research, 2006, 17(11): 2204-5.*

[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