Natural Products

ChemFaces

Jatrorrhizine Datasheet

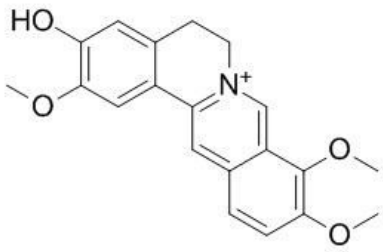
4th Edition (Revised in July, 2016)

[Product Information]

Name: Jatrorrhizine

Catalog No.: CFN98493

Cas No.: 3621-38-3



Purity: >=98%

M.F: $C_{20}H_{20}NO_4$

M.W: 338.38

Physical Description: Yellow powder

Synonyms:2,9,10-Trimethoxy-5,6-dihydroisoquinolino[2,1-b]isoquinolin-7-ium-3-ol.

[Intended Use]

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

[Source]

The barks of *Phellodendron chinense Schneid.*

[Biological Activity or Inhibitors]

Jatrorrhizine (JAT) is a novel tetrahydroisoquinoline alkaloid originally extracted from the

Chinese herb coptidis rhizome, it protects neuronallike cells against H_2O_2-induced toxicity, it demonstrates the neuroprotective effects against $A\beta_{25-35}$-induced injury via its antioxidative potential, which may provide a therapeutical potential to Alzheimer's disease (AD).[1]

Jatrorrhizine can offset postoperative ileus-induced delayed gastric emptying and intestinal transit in rats, an action mediated via the cholinergic pathway, but not involving activation of 5-HT(4) receptors.[2]

Jatrorrhizine can decrease blood glucose level of diabetic and normal mice at different degrees, it possesses the function of decreasing blood glucose. [3]

Jatrorrhizine is expected to be developed as a new gastric prokinetic drug, it is metabolized by human CYP1A2 and multiple UGT1A isoforms.[4]

Jatrorrhizine is a safe and potential antihypercholesterolemic agent which can improve the utilization and excretion of cholesterol by up-regulating the mRNA and protein expression of LDLR and CYP7A1.[5]

Jatrorrhizine has anti-inflammatory activity in lipopolysaccharide (LPS)-stimulated Raw264.7 cells, it has inhibitory activities against the expression of inducible NO syntase (iNOS) and cyclooxygenase-2 (COX-2).[6]

[Solvent]

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

[HPLC Method][7]

Mobile phase: Acetonitrile-1%Phosphoric acid H2O, gradient elution;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 345 nm.

[Storage]

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

[References]

[1] Luo T, Jiang W, Kong Y, *et al. Cns Neurol. Disord. Dr., 2012, 11(8):1030-7.*

[2] Zhang B B, Cao A L, Zhou J Y, *et al. J. Pharm. Pharmacol., 2012, 64(3):413-9.*

[3] Fu Y, Hu B R, Tang Q, *et al. Chinese Traditional & Herbal Drugs, 2005, 36(4):548-51.*

[4] Zhou H, Shi R, Ma B, *et al. Biopharm. Drug Dispos., 2013, 34(3):176-85.*

[5] Wu H, He K, Wang Y Z, *et al. Phytomed. Int. J.Phytother. Phytopharmacol., 2014, 21 (11):1373-81.*

[6] Cho Y J, Cho Y J. *J.Appl.Biol. Chem., 2011, 54(2).*

[7]Zhang Q, Cai L, Zhong G, *et al. China Journal of Chinese Materia Medica, 2010, 35(16):2061-4.*

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