

Berberine hydrochloride Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Berberine hydrochloride

Catalog No.: CFN99562

Cas No.: 633-65-8

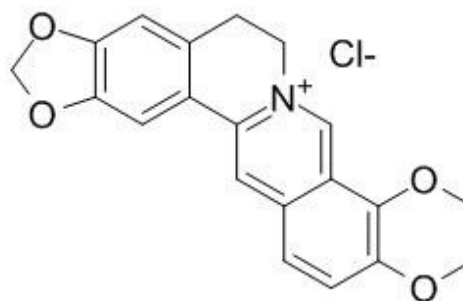
Purity: >=98%

M.F: C₂₀H₁₈NO₄Cl

M.W: 371.81

Physical Description: Yellow cryst.

Synonyms: Dirin; Kyoberin; Phelloberin.



[Intended Use]

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

[Source]

The herb of *Coptis chinensis* Franch.

[Biological Activity or Inhibitors]

Berberine hydrochloride (berberine), a natural plant alkaloid derived from Chinese herbal medicine, is characterized by diverse pharmacological effects, such as anticancer and lower elevated blood glucose, it can prevent adhesion by downregulating ICAM-1 and reduce inflammation by inhibiting the TAK1/JNK and TAK1/NF- κ B signaling after abdominal surgery, which brings out a good therapeutic approach for the development of clinical application for postoperative abdominal adhesion and inflammation.^[1]

Berberine hydrochloride is a conventional component in Chinese medicine, and is characterized by a diversity of pharmacological effects, has anticancer activity and the chance of regulating glucose and lipid metabolism in cancer cells showing more potential than ever. ^[2]

Berberine hydrochloride is an alkaloid with little or no fluorescence in water, in sodium dodecylsulfate solutions, the fluorescence intensity of this compound is enhanced several folds by ion-pairing with the anion of the surfactant. ^[3]

Berberine hydrochloride can significantly attenuate neutrophil infiltration, suppress myeloperoxidase activity, decrease NO, TNF- α and IL-1 β production, inhibits the phosphorylation of the NF- κ B p65 subunit and the degradation of its inhibitor, I κ B α , thus, exerts potent anti-inflammatory effects on LPS-induced mouse endometritis and may be a potential therapeutic agent for endometritis.^[4]

Berberine hydrochloride has significant reductive ability and radicals scavenging effects, especially on ABTS, hydroxyl radicals and DPPH radicals.^[5]

Sensory evaluation of the taste of berberine hydrochloride could be used as an Electronic Tongue.^[6]

Berberine hydrochloride has antifungal activity.^[7]

[Solvent]

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

[HPLC Method]^[8]

Mobile phase: Acetonitrile-0.1% Phosphoric acid= 53:47;

Flow rate: 1.0 ml/min;

Column temperature: Room temperature;

The wave length of determination: 345 nm.

[Storage]

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

[References]

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- [5] Luo A, Fan Y, Luo A, *et al. J. Med. Plant Res.*, 2011, 5(16):3702-7.
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- [7] Nakamoto K, Sadamori S, Hamada T. *J. Prosthet. Dent.*, 1990, 64(6):691-4.
- [8] Li X, Liu G Y, Ma JL, *et al. Pharmaceutical Journal of Chinese Peoples Liberation Army*, 2013(05):458-60.

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