

Nitidine chloride Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Nitidine chloride

Catalog No.: CFN98109

Cas No.: 13063-04-2

Purity: >=98%

M.F: C₂₁H₁₈ClNO₄

M.W: 383.83

Physical Description: White powder

Synonyms: 2,3-Dimethoxy-12-methyl-(1,3)-benzodioxolo(5,6-c)phenanthridinium chloride; Dimethoxy-12-methyl-, chloride.



[Intended Use]

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

[Source]

The roots of *Zanthoxylum nitidum* (Roxb.) DC.

[Biological Activity or Inhibitors]

Nitidine chloride, a natural phytochemical alkaloid derived from *Zanthoxylum nitidum* (Roxb) DC, exerts potent anticancer activity through STAT3 signaling cascade, it can dose dependently suppress VEGF-induced endothelial cell proliferation, migration, and tubular structure formation in vitro and dramatically reduce VEGF-triggered neovascularization in mouse cornea and Matrigel plugs in vivo; suggests that nitidine chloride is a promising anticancer drug candidate as a potent STAT3 signaling inhibitor.^[1]

Nitidine Chloride can inhibit breast cancer cells migration and invasion both in vitro and in vivo, it could have potential as a novel anti-metastasis drug to breast cancer.^[2]

Nitidine chloride exerts an anti-inflammatory property by inhibiting TNF- α , IL-1 β , and IL-6 production in association with reduced NF- κ B and MAPK signaling pathways in RAW 264.7 cells, these results reveal a novel role of nitidine chloride in regulation of inflammatory diseases. ^[3]

Nitidine chloride has protective effects on rats during myocardial ischemia/reperfusion.^[4]

[Solvent]

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

[HPLC Method]^[5]

Mobile phase: Acetonitrile- 0.02 M Monobasic potassium phosphate =34: 66 ;

Flow rate: 1.0 ml/min;

Column temperature: 40 °C;

The wave length of determination: 329 nm.

[Storage]

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

[References]

[1] Chen J, Wang J, Lin L, *et al. Mol. Cancer Ther.*, 2012, 11(2):277-87.

- [2] Pan X, Han H, Wang L, *et al. Cancer Lett.*, 2011, 313(2):181-91.
- [3] Wang Z, Jiang W, Zhang Z, *et al. J. Ethnopharmacol.*, 2012, 144(1):145-50.
- [4] Wei J B, Long S J, Qin S D, *et al. Chinese Journal of Clinical Rehabilitation*, 2006, 10(27):171-4.
- [5] Liu S H, Qin Q Y, Fang K, *et al. Guihaia*, 2005, 25(6):591-5.

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