



LKT Laboratories, Inc.

Nitidine Chloride

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Product Information

Product ID N3577

CAS No. 13063-04-2

Chemical Name

Synonym

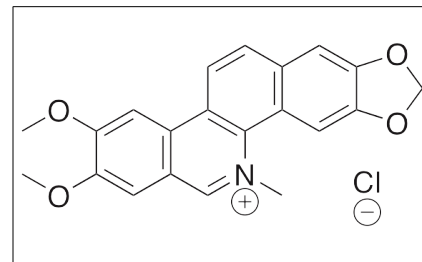
Formula $C_{21}H_{18}ClNO_4$

Formula Wt. 383.82

Melting Point

Purity $\geq 98\%$

Solubility 1mg/ml in DMSO



Bulk quantities available upon request

Product ID	Size
N3577	1 mg
N3577	5 mg
N3577	25 mg

Store Temp Ambient

Ship Temp Ambient

Description Nitidine is a benzophenanthridine alkaloid that exhibits anticancer chemotherapeutic, anti-inflammatory, anti-parasitic, and antifungal properties. In cancer cells, nitidine decreases phosphorylation of Akt and downregulates expression of matrix metalloproteinases 2 and 9 (MMP2/9), inhibiting cellular migration and invasion. In vivo, nitidine inhibits activation of JAK/STAT3, downregulates expression of cyclin D1, cyclin-dependent kinase 4 (CDK4), and Bcl-2, and upregulates expression of p21 and Bax, resulting in decreases in tumor weight and volume. Additionally, nitidine inhibits topoisomerase I and binds to DNA sequences containing alternating G and C base pairs. In macrophages, this compound decreases production of pro-inflammatory cytokines such as TNF- α , IL-1 β , and IL-6 and inhibits phosphorylation of MAPK and activation of NF- κ B. Nitidine also displays inhibitory activity against species of *Plasmodium* that are resistant to chloroquine and other antimalarial compounds.

References Fang Z, Tang Y, Jiao W, et al. Nitidine chloride inhibits renal cancer cell metastasis via suppressing AKT signaling pathway. *Food Chem Toxicol.* 2013 Oct;60:246-51. PMID: 23911800.

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Nyangulu JM, Hargreaves SL, Sharples SL, et al. Antimalarial benzo[c]phenanthridines. *Bioorg Med Chem Lett.* 2005 Apr 15;15(8):2007-10. PMID: 15808457.

Li D, Zhao B, Sim SP, et al. 2,3-Dimethoxybenzo[i]phenanthridines: topoisomerase I-targeting anticancer agents. *Bioorg Med Chem.* 2003 Feb 20;11(4):521-8. PMID: 12538017.

Del Poeta M, Chen SF, Von Hoff D, et al. Comparison of in vitro activities of camptothecin and nitidine derivatives against fungal and cancer cells. *Antimicrob Agents Chemother.* 1999 Dec;43(12):2862-8. PMID: 10582872.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.