



LKT Laboratories, Inc.

Dihydrosanguinarine

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Product Information

Product ID D3430

CAS No. 3606-45-9

Chemical Name

Synonym

Formula $C_{20}H_{15}NO_4$

Formula Wt. 333.34

Melting Point

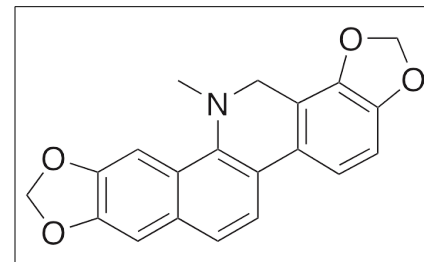
Purity $\geq 98\%$

Solubility 10mM in DMSO

Store Temp 4°C

Ship Temp Ambient

Description Dihydrosanguinarine (DHS) is a benzophenanthridine alkaloid that is a metabolite of sanguinarine. This compound exhibits a wide variety of antimicrobial activities (anti-parasitic, antifungal, and antibacterial) as well as anticancer and anti-inflammatory properties. DHS is active against *Leishmania*, *Botrytis*, *Erysiphe*, *Candida*, and various gram positive and gram negative bacteria including MRSA. In leukemia cells, DHS induces dissipation of the mitochondrial membrane potential, resulting in apoptosis and necrosis. DHS also binds DNA sequences containing alternating G and C base pairs. In vitro, DHS also inhibits LPS-induced production of NO and IL-6 and inhibits phosphorylation of ERK1/2 and p38.



Bulk quantities available upon request

Product ID	Size
D3430	1 mg
D3430	5 mg
D3430	25 mg

References Chae HS, Kang OH, Keum JH, et al. Anti-inflammatory effects of Hylomecon hylomeconoides in RAW 264.7 cells. *Eur Rev Med Pharmacol Sci.* 2012 Jul;16 Suppl 3:121-5. PMID: 22957426.

Yao JY, Zhou ZM, Li XL, et al. Antiparasitic efficacy of dihydrosanguinarine and dihydrochelerythrine from *Macleaya microcarpa* against *Ichthyophthirius multifiliis* in richadsin (*Squaliobarbus curriculus*). *Vet Parasitol.* 2011 Dec 29;183(1-2):8-13. PMID: 21813242.

Feng G, Zhang J, Liu YQ. Inhibitory activity of dihydrosanguinarine and dihydrochelerythrine against phytopathogenic fungi. *Nat Prod Res.* 2011 Jul;25(11):1082-9. PMID: 21500094.

Choi JG, Kang OH, Chae HS, et al. Antibacterial activity of Hylomecon hylomeconoides against methicillin-resistant *Staphylococcus aureus*. *Appl Biochem Biotechnol.* 2010 Apr;160(8):2467-74. PMID: 19578993.

Vrba J, Dolezel P, Vicar J, et al. Cytotoxic activity of sanguinarine and dihydrosanguinarine in human promyelocytic leukemia HL-60 cells. *Toxicol In Vitro.* 2009 Jun;23(4):580-8. PMID: 19346183.

Bai LP, Zhao ZZ, Cai Z, et al. DNA-binding affinities and sequence selectivity of quaternary benzophenanthridine alkaloids sanguinarine, chelerythrine, and nitidine. *Bioorg Med Chem.* 2006 Aug 15;14(16):5439-45. PMID: 16730995.

Navarro V, Delgado G. Two antimicrobial alkaloids from *Bocconia arborea*. *J Ethnopharmacol.* 1999 Aug;66(2):223-6. PMID:

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