



LKT Laboratories, Inc.

Coptisine Chloride, synthetic

Phone: 888-558-5227
651-644-8424
Fax: 888-558-7329
Email: getinfo@lktlabs.com
Web: lktlabs.com

Product Information

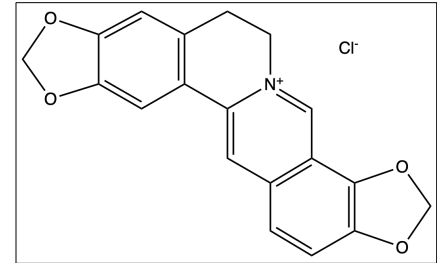
Product ID C5864
CAS No. 6020-18-4
Chemical Name 6,7-dihydro-[1,3]dioxolo[4',5':7,8]isoquinolino[3,2-a][1,3]dioxolo[4,5-g]isoquinolin-5-ium

Synonym

Formula C₁₉H₁₄ClNO₄
Formula Wt. 355.77
Melting Point
Purity ≥98%
Solubility DMSO:10mg/mL

Store Temp 4° C
Ship Temp Ambient

Description Coptisine is an isoquinoline alkaloid originally found in a variety of sources, including species of *Fumeria* and *Papavera*. Coptisine exhibits a wide variety of beneficial properties, including cardioprotective, anti-inflammatory, neuromodulatory, antibacterial, and anticancer activities. Coptisine attenuates mitochondrial respiratory dysfunction, inhibits expression of RhoA and/or Rho-associated kinase (ROCK), and decreases myocardial apoptosis. Coptisine also inhibits proliferation of vascular smooth muscle cells, potentially through upregulation of Gadd45a and Rgc32 genes. Coptisine induces cell cycle arrest in vascular smooth muscle cells as well, decreasing levels of cyclin D1 and potentially inhibiting microtubule polymerization. In heart tissue, this compound inhibits expression of IL-6, TNF-α, and IL-1β, displaying cardioprotective benefit in animal models of ischemia/reperfusion. Coptisine inhibits proliferation in cancer cell lines. This compound also inhibits monoamine oxidase A (MAO-A) and exhibits antibiotic activity against gram negative bacteria *Escherischia coli*.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size
C5864	5 mg
C5864	25 mg
C5864	100 mg

- References** Guo J, Wang SB, Yuan TY, et al. Coptisine protects rat heart against myocardial ischemia/reperfusion injury by suppressing myocardial apoptosis and inflammation. *Atherosclerosis*. 2013 Dec;231(2):384-91. PMID: 24267256.
- Gong LL, Fang LH, Wang SB, et al. Coptisine exert cardioprotective effect through anti-oxidative and inhibition of RhoA/Rho kinase pathway on isoproterenol-induced myocardial infarction in rats. *Atherosclerosis*. 2012 May;222(1):50-8. PMID: 22387061.
- Suzuki H, Tanabe H, Mizukami H, et al. Differential gene expression in rat vascular smooth muscle cells following treatment with coptisine exerts a selective antiproliferative effect. *J Nat Prod*. 2011 Apr 25;74(4):634-8. PMID: 21401114.
- Yan D, Jin C, Xiao XH, et al. Antimicrobial properties of berberines alkaloids in *Coptis chinensis* Franch by microcalorimetry. *J Biochem Biophys Methods*. 2008 Apr 24;70(6):845-9. PMID: 17804078.
- Tanabe H, Suzuki H, Mizukami H, et al. Double blockade of cell cycle progression by coptisine in vascular smooth muscle cells. *Biochem Pharmacol*. 2005 Oct 15;70(8):1176-84. PMID: 16140275.
- Lin CC, Ng LT, Hsu FF, et al. Cytotoxic effects of *Coptis chinensis* and *Epimedium sagittatum* extracts and their major constituents (berberine, coptisine and icariin) on hepatoma and leukaemia cell growth. *Clin Exp Pharmacol Physiol*. 2004 Jan-Feb;31(1-2):65-9. PMID: 14756686.
- Ro JS, Lee SS, Lee KS, et al. Inhibition of type A monoamine oxidase by coptisine in mouse brain. *Life Sci*. 2001 Dec 28;70

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