

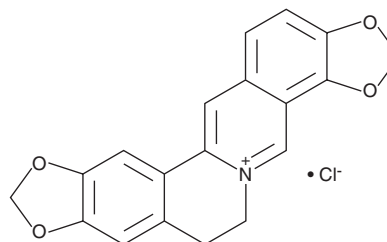
# PRODUCT INFORMATION



## Coptisine (chloride)

Item No. 28424

**CAS Registry No.:** 6020-18-4  
**Formal Name:** 6,7-dihydro-bis[1,3]benzodioxolo[5,6-a:4',5'-g]quinolizinium, monochloride  
**MF:** C<sub>19</sub>H<sub>14</sub>NO<sub>4</sub> • Cl  
**FW:** 355.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 229, 241, 266, 360, 462 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Description

Coptisine is an isoquinoline alkaloid that has been found in *Coptis chinensis* and has diverse biological activities, including antioxidant, enzyme inhibitory, antiproliferative, and anti-hypercholesterolemic properties.<sup>1-5</sup> It inhibits the production of reactive oxygen species (ROS) in isolated kidney mitochondria in a 2,7-dichlorodihydrofluorescein diacetate (DCFH-DA; Item No. 85155) assay (IC<sub>50</sub> = 48.93 μM).<sup>1</sup> Coptisine inhibits acetylcholinesterase (AChE) and butyrylcholinesterase (BChE) but not β-secretase 1 (BACE1) in cell-free enzyme assays (IC<sub>50</sub>s = 0.8, 5.81, and >100 μM, respectively). It also inhibits indoleamine 2,3-dioxygenase (IDO) *in vitro* (IC<sub>50</sub> = 6.3 μM), as well as organic cation transporter 1 (OCT1), OCT2, and OCT3 in MDCK cells (IC<sub>50</sub>s = 0.931, 2.27, and 2.27 μM, respectively, for the human transporters).<sup>2,3</sup> It inhibits proliferation of A549, H460, and H2170 human lung cancer cells with IC<sub>50</sub> values of 18.09, 29.5, and 21.6 μM, respectively.<sup>4</sup> Coptisine (70.05 mg/kg) decreases total serum cholesterol, triglyceride, and LDL-cholesterol levels and increases serum HDL-cholesterol levels in Syrian golden hamsters fed a high-fat and high-cholesterol diet.<sup>5</sup>

### References

1. Jung, H.A., Min, B.S., Yokozawa, T., et al. *Biol. Pharm. Bull.* **32(8)**, 1433-1438 (2009).
2. Yu, D., Tao, B.-B., Yang, Y.-Y., et al. *J. Alzheimers Dis.* **43(1)**, 291-302 (2015).
3. Li, L., Sun, S., Weng, Y., et al. *Xenobiotica* **46(2)**, 175-183 (2016).
4. Rao, P.C., Begum, S., Sahai, M., et al. *Tumour Biol.* **39(3)**, 1-13 (2017).
5. He, K., Ye, X., Wu, H., et al. *Lipids* **50(2)**, 185-194 (2015).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM