
Product Data Sheet

Product Name: Palmatine

Cat. No.: GC39127

Chemical Properties

Cas. No. 3486-67-7

SMILES COC1=C(OC)C2=C[N+]3=C(C4=CC(OC)=C(OC)C=C4CC3)C=C2C=C1Formula $C_{21}H_{22}NO_4^+$ M.Wt 352.4

Solubility DMSO : 70mg/mL Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

Palmatine is an alkaloid that has been found in *C. rhizoma* and has diverse biological activities.^{1,2,3,4,5} It inhibits acetylcholinesterase (AChE) and butyrylcholinesterase (BChE; IC₅₀s = 0.51 and 6.84 μM, respectively).¹ Palmatine (20, 40, and 80 μM) reduces Zika virus infection of Vero cells in a concentration-dependent manner.² *In vivo*, palmatine (50 and 100 mg/kg) reduces colonic myeloperoxidase (MPO) activity and IL-10, IL-1β, IL-6, and TNF-α levels, as well as protects mucosal integrity in a mouse model of colitis induced by dextran sulfate .³ It reduces stomach ulcer area in a rat model of acetic acid-induced gastric ulcers.⁴ Palmatine (10 and 20 mg/kg) reduces the number of small intestine and colon tumors in the *Apc^{Min+/-}* mouse model of multiple intestinal neoplasia.⁵

1.Jung, H.A., Min, B.S., Yokozawa, T., et al. Anti-Alzheimer and antioxidant activities of Coptidis Rhizoma alkaloids Biol. Pharm. Bull. 32(8)1433-1438(2009) 2.Ho, Y.-J., Lu, J.-W., Huang, Y.-L., et al. Palmatine inhibits Zika virus infection by disrupting virus binding, entry, and stability Biochem. Biophys. Res. Commun. 518(4)732-738(2019) 3.Zhang, X.-J.,

Caution: Product has not been fully validated for medical applications. For research use only.

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Yuan, Z.-W., Qu, C., et al. Palmatine ameliorated murine colitis by suppressing tryptophan metabolism and regulating gut microbiota *Pharmacol. Res.* 137:34-46 (2018) 4. Wang, L., Wang, X., Zhang, S.-L., et al. Gastroprotective effect of palmatine against acetic acid-induced gastric ulcers in rats *J. Nat. Med.* 71(1):257-264 (2016) 5. Ma, W.-K., Li, H., Dong, C.-L., et al. Palmatine from *Mahonia bealei* attenuates gut tumorigenesis in *ApcMin/+* mice via inhibition of inflammatory cytokines *Mol. Med. Rep.* 14(1):491-498 (2016)

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