

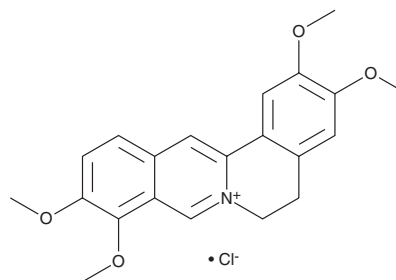
PRODUCT INFORMATION



Palmatine (chloride)

Item No. 30318

CAS Registry No.: 10605-02-4
Formal Name: 5,6-dihydro-2,3,9,10-tetramethoxy-dibenzo[a,g]quinolizinium, monochloride
MF: C₂₁H₂₂NO₄ • Cl
FW: 387.9
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 267, 350, 433 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years
Item Origin: Plant/*Fibraurea recisa*



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

Laboratory Procedures

Palmatine (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the palmatine (chloride) in the solvent of choice, which should be purged with an inert gas. Palmatine (chloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of palmatine (chloride) in these solvents is approximately 5 mg/ml in ethanol and 30 mg/ml in DMSO and DMF.

Palmatine (chloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, palmatine (chloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Palmatine (chloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Palmatine is an alkaloid that has been found in *C. rhizoma* and has diverse biological activities.¹⁻⁵ 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 (DSS; Item No. 23250).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

References

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., 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 *Apc*^{Min/+} mice via inhibition of inflammatory cytokines. *Mol. Med. Rep.* **14(1)**, 491-498 (2016).

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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