

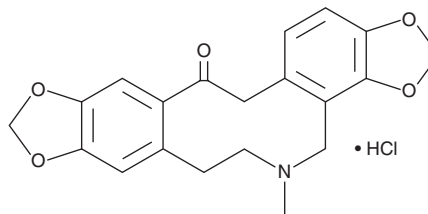
PRODUCT INFORMATION



Protopine (hydrochloride)

Item No. 23366

CAS Registry No.: 6164-47-2
Formal Name: 4,6,7,14-tetrahydro-5-methyl-bis[1,3]benzodioxolo[4,5-c:5',6'-g]azecin-13(5H)-one, monohydrochloride
MF: C₂₀H₁₉NO₅ • HCl
FW: 389.8
Purity: ≥98%
UV/Vis.: λ_{max}: 206 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Protopine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the protopine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Protopine (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of protopine (hydrochloride) in these solvents is approximately 0.1 mg/ml.

Description

Protopine is an alkaloid found in *Berberidaceae*, *Ranunculaceae*, *Rutaceae*, *Fumariaceae*, and *Papaveraceae* with diverse biological activities.¹ It inhibits platelet aggregation induced by ADP, arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607), platelet-activating factor (PAF), and collagen in rabbit platelet-rich plasma at a concentration of 100 μM.² Protopine inhibits contraction of isolated rat thoracic aorta induced by norepinephrine (Item No. 16673) and is a non-selective inhibitor of I_{Ca}, I_K, I_{K1}, and I_{Na} in guinea pig ventricular myocytes.^{3,4} Protopine inhibits the growth of *H. pylori* with an MIC₅₀ value of 100 μg/ml.⁵ It reduces growth of PC3 and DU145 prostate cancer cells in a dose-dependent manner *via* induction of mitotic cell cycle arrest.⁶ Protopine (0.005 mg/kg) increases latency to first seizure in a mouse model induced by pentylenetetrazole (Item No. 18682).⁷

References

1. Üstünes, L., Laekeman, G.M., Gözler, B., et al. *J. Nat. Prod.* **51(5)**, 1021-1022 (1988).
2. Ko, F.N., Wu, T.S., Lu, S.T., et al. *Thromb. Res.* **56(2)**, 289-298 (1989).
3. Ko, F.-N., Wu, T.-S., Lu, S.-T., et al. *Jpn. J. Pharmacol.* **58(1)**, 1-9 (1992).
4. Song, L.-S., Ren, G.-J., Chen, Z.-L., et al. *Br. J. Pharmac.* **129(5)**, 893-900 (2000).
5. Mahady, G.B., Pendland, S.L., Stoia, A., et al. *Phytother. Res.* **17(3)**, 217-221 (2003).
6. Chen, C.-H., Liao, C.-H., Chang, Y.-L., et al. *Cancer Lett.* **315(1)**, 1-11 (2012).
7. Prokopenko, Y., Tsyvunin, V., Shtrygol, S., et al. *Sci. Pharm.* **84(3)**, 547-554 (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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