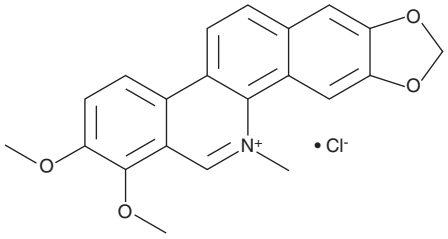
PRODUCT INFORMATION

Chelerythrine (chloride)

Item No. 11314

CAS Registry No.:	3895-92-9
Formal Name:	1,2-dimethoxy-12-methyl-[1,3]benzodioxolo[5,6-c]phenanthridinium, monochloride
Synonyms:	Broussonpapyrine chloride, NSC 646662
MF:	$C_{21}H_{18}NO_4$ • Cl
FW:	383.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 212, 271, 320, 398 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

Chelerythrine (chloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the chelerythrine (chloride) in the solvent of choice. Chelerythrine (chloride) is soluble in DMSO, which should be purged with an inert gas. The solubility of chelerythrine chloride in DMSO is approximately 0.25 mg/ml.

Chelerythrine (chloride) is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Chelerythrine is a potent, cell permeable inhibitor of protein kinase C (IC_{50} = 660 nM) that does not inhibit tyrosine protein kinases, cAMP-dependent protein kinase, or calcium/calmodulin-dependent protein kinase.[1] Chelerythrine also inhibits Bcl-xL function (IC_{50} = 1.5 µM) by displacing Bax binding, inducing apoptosis in several cancer cell lines.[2] Chelerythrine can also have PKC-independent effects, activate p38 MAP kinase and JUNK signaling pathways, and induce apoptosis in cancer cells both *in vitro* and *in vivo*.[3-6]

References

1. Herbert, J.M., Augereau, J.M., Gleye, J., *et al. Biochem. Biophys. Res. Commun.* **172**, 993-999 (1990).
2. Chan, S.-L., Lee, M.C., Tan, K.O., *et al. J. Biol. Chem.* **278(23)**, 20453-20456 (2003).
3. Lee, S.K., Qing, W.G., Mar, W., *et al. J. Biol. Chem.* **273(31)**, 19829-19833 (1998).
4. Chmura, S.J., Dolan, M.E., Cha, A., *et al. Clin. Cancer Res.* **6**, 737-742 (2012).
5. Yu, R., Mandlekar, S., Tan, T.-H., *et al. J. Biol. Chem.* **275(13)**, 9612-9619 (2000).
6. Zhang, Z.-F., Guo, Y., Zhang, J., *et al. Arch. Pharm. Res.* **34(5)**, 791-800 (2011).

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