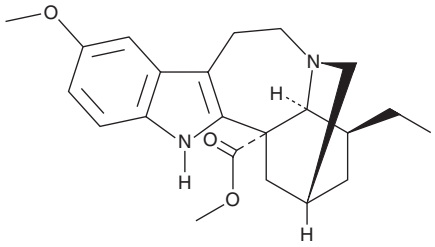
PRODUCT INFORMATION

Voacangine

Item No. 24692

CAS Registry No.: 510-22-5
Formal Name: 12-methoxy-ibogamine-18-carboxylic acid, methyl ester
Synonym: 10-methoxy Coronaridine
MF: $C_{22}H_{28}N_2O_3$
FW: 368.5
Purity: ≥98%
UV/Vis.: λ_{max}: 226, 288 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Voacangine is supplied as a crystalline solid. A stock solution may be made by dissolving the voacangine in the solvent of choice. Voacangine is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of voacangine in these solvents is approximately 16 mg/ml.

Voacangine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, voacangine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Voacangine has a solubility of approximately 0.33 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Voacangine is an indole alkaloid that has been found in *T. citrifolia*, *V. africana*, *V. obtusa*, and *T. iboga* with diverse biological activities.[1,2] It inhibits the growth of *M. tuberculosis*, *M. avium*, and *M. kansasii* with MIC values of 50, >200, and 100 µg/mL, respectively.[2] Voacangine (0.01-100 µM) dose-dependently reduces membrane currents in HEK293 cells expressing the hERG potassium channel and displaces the hERG ligand dofetilide (Item No. 15045) with a K_i value of 3.9 µM.[3] Voacangine suppresses agonist-induced activation of transient receptor potential (TRP) channels with IC_{50} values of 50 and 9 µM for activation induced by the TRPV1 agonist capsaicin (Item No. 92350) and the TRPM8 agonist menthol, respectively.[4] It also activates TRPA1 channels and stimulates calcium influx (IC_{50} = 8 µM in HEK293 cells expressing TRPA1), an effect that is blocked by the TRPA1 blocker HC-030031 (Item No. 11923). *In vivo*, voacangine (2 and 4 µg per egg) inhibits angiogenesis in chick embryo chorioallantoic membranes without apparent cytotoxicity.[5]

References

1. Bartlett, M.F., Dickel, D.F., and Taylor, W.I. The alkaloids of *Tabernanthe iboga*. Part IV. The structures of ibogamine, ibogaine, tabernanthine and voacangine. *J. Am. Chem. Soc.* **80(1)**, 126-136 (1958).
2. Rastogi, N., Abaul, J., Goh, K.S., *et al.* Antimycobacterial activity of chemically defined natural substances from the Caribbean flora in Guadeloupe. *FEMS Immunol. Med. Microbiol.* **20(4)**, 267-273 (1998).
3. Alper, K., Bai, R., Liu, N., *et al.* hERG Blockade by iboga alkaloids. *Cardiovasc. Toxicol.* **16(1)**, 14-22 (2016).
4. Terada, Y., Horie, S., Takayama, H., *et al.* Activation and inhibition of thermosensitive TRP channels by voacangine, an alkaloid present in *Voacanga africana*, an African tree. *J. Nat. Prod.* **77(2)**, 285-297 (2014).
5. Kim, Y., Jung, H.J., and Kwon, H.J. A natural small molecule voacangine inhibits angiogenesis both *in vitro* and *in vivo*. *Biochem. Biophys. Res. Commun.* **417(1)**, 330-334 (2012).

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