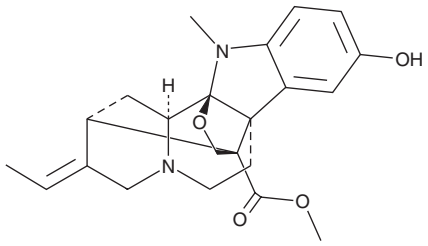
PRODUCT INFORMATION

Akuammine

Item No. 35149

CAS Registry No.:	3512-87-6
Formal Name:	(2S,3E,7aS,12aS,12bS,15R)-3-ethylidene-1,3,4,6,7,12b-hexahydro-9-hydroxy-12-methyl-2H,12H-12a,2,7a-(epoxyethanylylidene)indolo[2,3-a] quinolizine-15-carboxylic acid, methyl ester
Synonyms:	(-)-Akuammine, Vincamajoridine
MF:	$C_{22}H_{26}N_2O_4$
FW:	382.5
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Picralima nitida*



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

Laboratory Procedures

Akuammine is supplied as a crystalline solid. A stock solution may be made by dissolving the akuammine in the solvent of choice, which should be purged with an inert gas. Akuammine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of akuammine in these solvents is approximately 1 and 2 mg/ml, respectively.

Description

Akuammine is an indole alkaloid that has been found in *Picralima nitida* and has analgesic activity.[1] It selectively binds to the μ- and κ-opioid receptors over the δ-opioid receptor (K_is = 0.3, 1.68, and 10.4 μM for the human receptors, respectively). Akuammine inhibits forskolin-induced cAMP production in HEK293 cells expressing human μ- or κ-opioid receptors (IC_{50}s = 2.6 and 0.073 μM, respectively). It increases the latency to withdrawal in the tail-flick or hot plate test in mice when administered at a dose of 60 mg/kg.

Reference

1. Creed, S.M., Gutridge, A.M., Argade, M.D., *et al.* Isolation and pharmacological characterization of six opioidergic *Picralima nitida* alkaloids. *J. Nat. Prod.* **84(1)**, 71-80 (2021).

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