PRODUCT INFORMATION

Sinomenine (hydrochloride)
Item No. 16143

CAS Registry No.: 6080-33-7
Formal Name: (9a,13a,14a)-7,8-didehydro-4-hydroxy-3,7-dimethoxy-17-methyl-morphinan-6-one, monohydrochloride
Synonyms: Cucoline, NSC 76021
MF: C_{19}H_{23}NO_4 \cdot HCl
FW: 365.9
Purity: \( \geq 98\% \)
UV/Vis.: \( \lambda_{\text{max}}: 236 \text{ nm} \)
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboatory Procedures

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of sinomenine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sinomenine (hydrochloride) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sinomenine is a natural plant alkaloid commonly used to alleviate inflammation associated with rheumatoid arthritis.\(^1\) It activates histamine release, reduces joint stiffness and pain, and alters cytokine generation without producing gastrointestinal adverse events.\(^1\)\(^-\)\(^4\) Sinomenine also impairs signaling through NF-\(\kappa\)B, resulting in immunosuppression as well as reduced inflammation and pain.\(^1\)\(^,\)\(^3\) It enhances the bioavailability of some compounds, at least in part through an inhibition of drug export by transporters like P-glycoprotein.\(^5\)\(^,\)\(^6\)

References