# Cinchonidine

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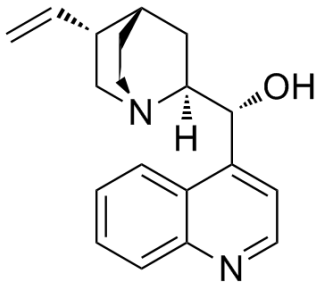
|---|---|
| **Cat. No.:** | HY-N0173 |
| **CAS No.:** | 485-71-2 |
| **Molecular Formula:** | $C_{19}H_{22}N_2O$ |
| **Molecular Weight:** | 294.39 |
| **Target:** | Serotonin Transporter |
| **Pathway:** | Neuronal Signaling |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 6 months<br>-20°C 1 month |




## SOLVENT & SOLUBILITY

**In Vitro**

**DMSO : 33.33 mg/mL (113.22 mM;** Need ultrasonic)

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 3.3969 mL | 16.9843 mL | 33.9685 mL |
| | 5 mM | 0.6794 mL | 3.3969 mL | 6.7937 mL |
| | 10 mM | 0.3397 mL | 1.6984 mL | 3.3969 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: ≥ 2.5 mg/mL (8.49 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 2.5 mg/mL (8.49 mM); Clear solution
3. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 2.5 mg/mL (8.49 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Cinchonidine (α-Quinidine) is a cinchona alkaloid found in Cinchona officinalis and Gongronema latifolium. A building block used in asymmetric synthesis in organic chemistry. Weak inhibitor of **serotonin transporter (SERT)** with **$K_i$**s of 330, 4.2, 36, 196, 15 μM for dSERT, hSERT, hSERT I172M, hSERT S438T, hSERT Y95F, respectively. Antimalarial activities[1].

**$IC_{50}$ & Target**

Ki: 330 μM (dSERT), 4.2 μM (hSERT), 36 μM (hSERT I172M), 196 μM (hSERT S438T), 15 μM (hSERT Y95F) [1]

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|---|---|
| **In Vitro** | Cinchonidine (α-Quinidine) is a cinchona alkaloid found in Cinchona officinalis and Gongronema latifolium. A building block used in asymmetric synthesis in organic chemistry. Weak inhibitor of **serotonin transporter (SERT)** with $K_i$s of 330, 4.2, 36, 196, 15 μM for dSERT, hSERT, hSERT I172M, hSERT S438T, hSERT Y95F, respectively[1]. |

## REFERENCES

[1]. Beckman ML, et al. Stereoselective inhibition of serotonin transporters by antimalarial compounds. Neurochem Int. 2014 Jul;73:98-106.



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