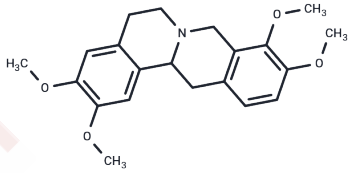
Data Sheet (Cat.No.T2714)

TargetMol

L-(R,S)-Tetrahydropalmatine

Chemical Properties



CAS No. : 10097-84-4

Formula: C21H25NO4

Molecular Weight: 355.43

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	L-(R,S)-Tetrahydropalmatine (Rotundine) is extracted from Corydalis yanhusuo W. T. Wang.
Targets(IC50)	5-HT Receptor,Dopamine Receptor
In vitro	Rotundine displays a higher affinity to dopamine D1 than D2 receptor with Ki of 124 nM and 388 nM, respectively, while the IC50 values are 166 nM (D1) and 1.47 μM (D2), respectively. Rotundine exhibits a weak inhibitory activity against dopamine D3 with IC50 of 3.25 μM. Rotundine also potently inhibits 5-HT1A with IC50 of 374 nM and Ki of 340 nM. In addition to the antagonism of postsynaptic dopamine receptors, inhibition of presynaptic autoreceptors by Rotundine leads to increased dopamine release, which is probably attributed to lower affinity of Rotundine for D2 receptors. Along with dopamine receptors, Rotundine can interact with a number of other receptor types, including α-1 adrenergic receptors, at which it functions as an antagonist, and γ-aminobutyric acid receptors, at which it facilitates γ-aminobutyric acid binding through positive allosteric effects. [1]

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 55 mg/mL (154.74 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8135 mL	14.0675 mL	28.1349 mL
5 mM	0.5627 mL	2.8135 mL	5.627 mL
10 mM	0.2813 mL	1.4067 mL	2.8135 mL
50 mM	0.0563 mL	0.2813 mL	0.5627 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Wang JB, et al. Future Med Chem, 2012, 4(2), 177-186.
Liu YL, et al. Acta Pharmacol Sin, 2005, 26(5), 533-538.
Kou J, et al. Biol Pharm Bull, 2005, 28(1), 176-180.
Xi ZX, et al. Neuropharmacology, 2007, 53(6), 771-782.
Ma TW, et al. Lett Drug Des Discov, 2011, 8(5), 464-468.