Yohimbine

Cat. No.: HY-12715

CAS No.: 146-48-5

Molecular Formula: $C_{21}H_{26}N_2O_3$

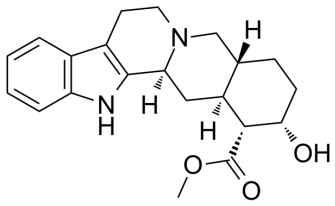
Molecular Weight: 354.44

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (14.11 mM; Need ultrasonic)

H_2O : 1 mg/mL (2.82 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8214 mL	14.1068 mL	28.2135 mL
	5 mM	0.5643 mL	2.8214 mL	5.6427 mL
	10 mM	0.2821 mL	1.4107 mL	2.8214 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 0.5 mg/mL (1.41 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 0.5 mg/mL (1.41 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.5 mg/mL (1.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Yohimbine is a potent and relatively nonselective alpha 2-adrenergicreceptor (AR) antagonist, with IC50 of 0.6 μM. IC50 value: 0.6 uM [1]Target: alpha 2-adrenergic receptorin vitro: Yohimbine inhibits alpha2-receptor antagonist with Ki of 1.05 nM, 1.19 nM, and 1.19 nM for α2A, α2B, α2C, respectively. Yohimbine also inhibits 5-HT1B with Ki of 19.9 nM. Yohimbine acts to block the lowering of cAMP by alpha-2 adrenoceptor agonists. yohimbine actually causes a pronounced lowering of tyrosinase activity. [3]in vivo: Yohimbine is an antagonist at alpha2-noradrenaline receptors with putative panicogenic effects in human subjects, was administered to Swiss-Webster mice at doses of 0.5, 1.0, and 2.0 mg/kg. Yohimbine

potentiates active defensive responses to threatening stimuli in Swiss-Webster mice.[2]

CUSTOMER VALIDATION

- J Neuroinflammation. 2022 May 27;19(1):123.
- Biomed Pharmacother. 2022 Apr 26;150:113006.
- Neurosci Bull. 2022 Apr;38(4):386-402.
- Eur J Neurosci. 2021 Nov 4.
- Exp Neurobiol. 2020 Oct 31;29(5):356-375.

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REFERENCES

[1]. Saeed SA, et al. Signaling mechanisms mediated by G-protein coupled receptors in human platelets. Acta Pharmacol Sin. 2004 Jul;25(7):887-892.

[2]. Blanchard RJ, et al. Yohimbine potentiates active defensive responses to threatening stimuli in Swiss-Webster mice. Pharmacol Biochem Behav. 1993 Mar;44(3):673-681.

[3]. Fuller BB, et al. Downregulation of tyrosinase activity in human melanocyte cell cultures by yohimbine. J Invest Dermatol. 2000 Feb;114(2):268-276.

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