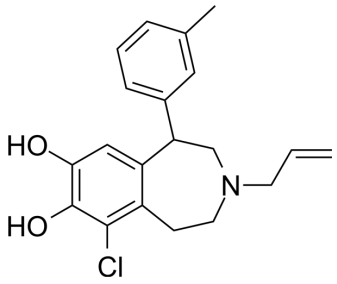
SKF 83822

Cat. No.:	HY-116874
CAS No.:	74115-08-5
Molecular Formula:	$C_{20}H_{22}ClNO_2$
Molecular Weight:	343.85
Target:	Dopamine Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (290.82 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9082 mL	14.5412 mL	29.0824 mL
	5 mM	0.5816 mL	2.9082 mL	5.8165 mL
	10 mM	0.2908 mL	1.4541 mL	2.9082 mL

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

BIOLOGICAL ACTIVITY

Description

SKF 83822 is an atypical agonist of dopamine D1 receptor. SKF 83822 activates adenylyl cyclase (AC), but not phospholipase C (PLC). SKF 83822 is also proved to stimulate AC via cAMP production. SKF 83822 can be used for research of schizophrenia [1][2].

IC_{50} & Target

Rat D_1 Receptor

In Vivo

SKF 83822 (25-100 μg/kg; s.c.; single dose after antagonist) produces a strong rotational response in rat in a dose-dependent manner. And it also stimulates strong expression of the IEG products c-Fos, Fra2, Zif/268 and Arc in the deinnervated striatum[1].

SKF 83822 shows significant effects in a moderate and high dose with 0.25 mg/kg and 0.35 mg/kg, respectively, in monkeys. And it (0.15-0.35 mg/kg; s.c.; single dose) induces locomotion but nor inducing dyskinesia. SKF 83822 results in a state of extreme arousal and locomotor activation without stereotypy[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Adult, male Sprague-Dawley derived rats[1]

Dosage:	6.25 μg/kg, 25 μg/kg, 50 μg/kg, and 100 μg/kg; with or without 0.5 mg/kg antagonist SCH 23390.
Administration:	SC; single dose, 30 min after antagonist treatment.
Result:	Produced a strong rotational response at 50 μg/kg which was approximately midway between that produced by the 25 and 100 μg/kg doses in the first experiment. Could be inhibited by antagonist of dopamine D1 receptor, SCH 23390.

REFERENCES

[1]. Wirtshafter D. Rotation and immediate-early gene expression in rats treated with the atypical D1 dopamine agonist SKF 83822. Pharmacol Biochem Behav. 2007 Mar;86(3):505-10.

[2]. Peacock L, et al. Aberrant behavioral effects of a dopamine D1 receptor antagonist and agonist in monkeys: evidence of uncharted dopamine D1 receptor actions. Biol Psychiatry. 2001 Oct 1;50(7):501-9.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA