(S)-(+)-Rolipram

Cat. No.: HY-B0392

CAS No.: 85416-73-5

Molecular Formula: $C_{16}H_{21}NO_3$

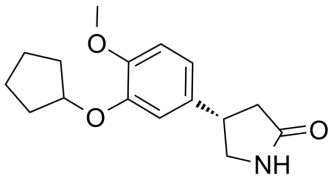
Molecular Weight: 275.34

Target: Phosphodiesterase (PDE); Apoptosis

Pathway: Metabolic Enzyme/Protease; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (363.19 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.6319 mL	18.1594 mL	36.3187 mL
5 mM	0.7264 mL	3.6319 mL	7.2637 mL
10 mM	0.3632 mL	1.8159 mL	3.6319 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: ≥ 2.5 mg/mL (9.08 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.08 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.08 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(S)-(+)-Rolipram ((+)-Rolipram) is a cyclic AMP(cAMP)-specific phosphodiesterase 4 (PDE4) inhibitor, with an IC_{50} of 1100 nM. (S)-(+)-Rolipram can suppresse tumor necrosis factor-alpha (TNFα) production by human mononuclear cells[1][2][3].

IC_{50} & Target

PDE4
1100 nM (IC_{50})

In Vitro

(+)-Rolipram (0.015-1000 μM; 20 h) dose-dependently suppress LPS-induced TNF production of human mononuclear cells

	(MNC), with an IC_{50} of 550 nM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	(+)-Rolipram (0.025-6.25 mg/kg; a single i.p.) dose-dependently inhibits locomotor activity and induces head twitches in rats [2]. (+)-Rolipram (0.06-25 mg/kg; a single i.p.) causes a dose-related fall in rectal temperature of rats[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Semmler J, et, al. The specific type IV phosphodiesterase inhibitor rolipram suppresses tumor necrosis factor-alpha production by human mononuclear cells. Int J Immunopharmacol. 1993 Apr;15(3):409-13.

[2]. Wachtel H. Neurotropic effects of the optical isomers of the selective adenosine cyclic 3',5'-monophosphate phosphodiesterase inhibitor rolipram in rats in-vivo. J Pharm Pharmacol. 1983 Jul;35(7):440-4.

[3]. Ortmann R, et, al. Rolipram forms a potent discriminative stimulus in drug discrimination experiments in rats. Psychopharmacology (Berl). 1986;89(3):273-7.

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