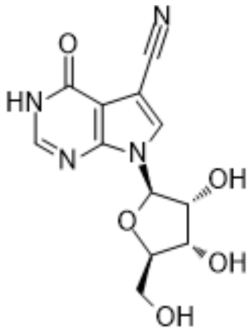
Jaspamycin

Cat. No.:	HY-111759
CAS No.:	22242-96-2
Molecular Formula:	$C_{12}H_{12}N_4O_5$
Molecular Weight:	292.25
Target:	PKA; Parasite
Pathway:	Stem Cell/Wnt; Anti-infection
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 : 41.67 mg/mL (142.58 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.4217 mL	17.1086 mL	34.2173 mL
5 mM	0.6843 mL	3.4217 mL	6.8435 mL
10 mM	0.3422 mL	1.7109 mL	3.4217 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: ≥ 2.08 mg/mL (7.12 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (7.12 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (7.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Jaspamycin (7-CN-7-C-Ino) is a potent activator of PKA, binding to the R site (PKAR), with an EC_{50} of 6.5 nM and K_d of 8 nM in Trypanosoma brucei. Jaspamycin (7-CN-7-C-Ino) does not bind with purified human PKARIα. Anti-parasite activity[1].

IC_{50} & Target			
	Trypanosoma brucei PKAR(199-499) 6.5 nM (EC50)	Trypanosoma	Trypanosoma brucei PKA holoenzyme 8 nM (Kd)

REFERENCES

[1]. Sabine Bachmaier, et al. Nucleoside analogue activators of cyclic AMP-independent protein kinase A of Trypanosoma. Nat Commun. 2019 Mar 29;10(1):1421.

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