2,2'-Bipyridine

Cat. No.: HY-D0020

CAS No.: 366-18-7

Molecular Formula: $C_{10}H_8N_2$

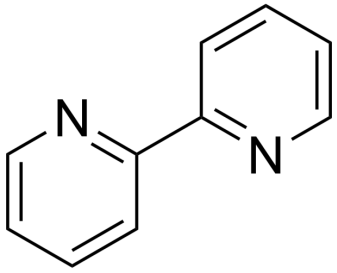
Molecular Weight: 156.18

Target: Biochemical Assay Reagents

Pathway: Others

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 : 100 mg/mL (640.29 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.4029 mL	32.0143 mL	64.0287 mL
	5 mM	1.2806 mL	6.4029 mL	12.8057 mL
	10 mM	0.6403 mL	3.2014 mL	6.4029 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: ≥ 3 mg/mL (19.21 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3 mg/mL (19.21 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3 mg/mL (19.21 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

2,2'-Bipyridine is the unique molecular scaffold of the bioactive natural products. 2,2'-Bipyridine is extensively used as the core structure of many chelating ligands by acting as a bridge in the arrangement of the catalytic center. 2,2'-Bipyridine shows robust redox stability and hyperglycemic activity[1][2].

In Vivo

2,2'-Bipyridine (40 mg/kg; s.c.; once) produces an initial hyperglycemia (an increase of 53.8 mg/100 mL at 2 hours) followed by a transient hypoglycemicphase at 24 hours and does not produce permanent diabetes[2].

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

Animal Model:	Male Holtzman rats (6-8 weeks old)[2].
Dosage:	40 mg/kg
Administration:	Subcutaneous injection; once.
Result:	Showed hyperglycemic activity.

REFERENCES

[1]. Kenny A D, et al. The hyperglycemic activity of 2, 2'-bipyridine[J]. Journal of Pharmacology and Experimental Therapeutics, 1962, 135(3): 317-322.

[2]. Chen D, et al. Discovery of caerulomycin/collismycin-type 2,2'-bipyridine natural products in the genomic era. J Ind Microbiol Biotechnol. 2019;46(3-4):459-468.

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