Isosorbide dinitrate

Cat. No.: HY-B1409

CAS No.: 87-33-2

Molecular Formula: $C_6H_8N_2O_8$

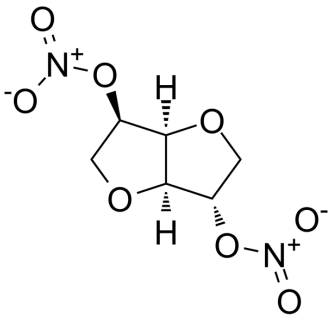
Molecular Weight: 236.14

Target: NO Synthase

Pathway: Immunology/Inflammation

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (423.48 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.2348 mL	21.1739 mL	42.3478 mL
	5 mM	0.8470 mL	4.2348 mL	8.4696 mL
	10 mM	0.4235 mL	2.1174 mL	4.2348 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 (8.81 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (8.81 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (8.81 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Isosorbide dinitrate (ISDN) is an NO donor that prevents LV remodeling and degradation of cardiac function following myocardial infarction (MI)[1].

In Vivo

Isosorbide dinitrate (3 mg/kg; intratracheal; for 13 days) improves pulmonary artery pressure and ventricular remodeling in a rat model of heart failure following myocardial infarction[1].

Isosorbide dinitrate postconditioning exhibits a cardioprotective effect against rat myocardial ischemia-reperfusion injury in vivo[2].

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

Animal Model:	5–6 weeks old male juvenile Sprague-Dawley rats (200–250 g)[1]
Dosage:	3 mg/kg
Administration:	Intratracheal; for 13 days following coronary ligation
Result:	Reduced MI size and alleviated left and right ventricular remodeling following MI.

REFERENCES

[1]. Wang X , et al. Intratracheal administration of isosorbide dinitrate improves pulmonary artery pressure and ventricular remodeling in a rat model of heart failure following myocardial infarction. Exp Ther Med. 2017 Aug;14(2):1399-1408.

[2]. Zhao X, et al. Cardioprotective Effect of Isosorbide Dinitrate Postconditioning Against Rat Myocardial Ischemia-Reperfusion Injury In Vivo. Med Sci Monit. 2019 Mar 2;25:1629-1636.

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