# Isosorbide

**Cat. No.:** HY-B1469

**CAS No.:** 652-67-5

**Molecular Formula:** $C_6H_{10}O_4$

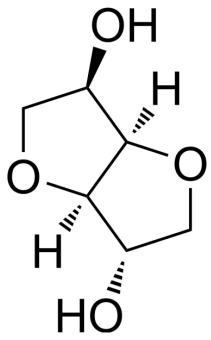
**Molecular Weight:** 146.14

**Target:** Others

**Pathway:** Others

**Storage:**

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




## SOLVENT & SOLUBILITY

**In Vitro**

$H_2O$ : ≥ 100 mg/mL (684.28 mM)

DMSO : ≥ 100 mg/mL (684.28 mM)

* "≥" means soluble, but saturation unknown.

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 6.8428 mL | 34.2138 mL | 68.4275 mL |
| 5 mM | 1.3686 mL | 6.8428 mL | 13.6855 mL |
| 10 mM | 0.6843 mL | 3.4214 mL | 6.8428 mL |

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

**In Vivo**

1. Add each solvent one by one: PBS
   Solubility: 150 mg/mL (1026.41 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (17.11 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (17.11 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (17.11 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Isosorbide (D-Isosorbide), an orally active vasodilating agent that can be used for the research of heart failure and angina (chest pain). Isosorbide is also an oral hyperosmotic diuretic[1][2].

| | |
|---|---|
| **In Vivo** | Isosorbide (5 mg/kg; a single p.o.) significantly increases the urine volume of rats within 2 hours which lasts through the 8 hour experimental period[3].<br>Isosorbide (5 mg/kg; a single p.o. 30 min prior to gallium injection) significantly reduces the urinary concentrations of both gallium and calcium in rats[3].<br>Isosorbide (5 mg/kg; p.o. 30 min prior to gallium injection for 6 d) results in the formation of fewer renal precipitates and histopathologic changes than in the nondiuresed animals[3].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## REFERENCES


[1]. Rose M, et, al. Isosorbide as a renewable platform chemical for versatile applications--quo vadis? ChemSusChem. 2012 Jan 9;5(1):167-76.

[2]. Nozawa I, et, al. Efficacy of long-term administration of isosorbide for Ménière's disease. ORL J Otorhinolaryngol Relat Spec. May-Jun 1995;57(3):135-40.

[3]. Newman RA, et, al. Gallium nitrate (NSC-15200) induced toxicity in the rat: a pharmacologic, histopathologic and microanalytical investigation. Cancer. 1979 Nov;44(5):1728-40.





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