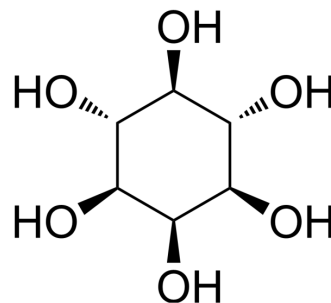


i-Inositol

| | | | |
|---------------------------|---|-------|---------|
| Cat. No.: | HY-B1411 | | |
| CAS No.: | 87-89-8 | | |
| Molecular Formula: | C ₆ H ₁₂ O ₆ | | |
| Molecular Weight: | 180.16 | | |
| Target: | Endogenous Metabolite | | |
| Pathway: | Metabolic Enzyme/Protease | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 2 years |
| | | -20°C | 1 year |



SOLVENT & SOLUBILITY

In Vitro

H₂O : 62.5 mg/mL (346.91 mM; ultrasonic and warming and heat to 60°C)
 DMSO : 10 mg/mL (55.51 mM; Need ultrasonic)

| | Solvent Concentration | Mass | | |
|------------------------------|--------------------------|-----------|------------|------------|
| | | 1 mg | 5 mg | 10 mg |
| Preparing Stock Solutions | 1 mM | 5.5506 mL | 27.7531 mL | 55.5062 mL |
| | 5 mM | 1.1101 mL | 5.5506 mL | 11.1012 mL |
| | 10 mM | 0.5551 mL | 2.7753 mL | 5.5506 mL |

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (555.06 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 1 mg/mL (5.55 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 1 mg/mL (5.55 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

i-Inositol (myo-Inositol) is a compound of sugar alcohols. i-Inositol is involved in a series of biological processes such as insulin signal transduction and cytoskeletal transduction. i-Inositol mainly exists in glial cells and plays an osmotic role^{[1][2][3]}.

IC₅₀ & Target

Human Endogenous Metabolite

In Vitro

i-Inositol (2 mg/mL, 2 h) can improve sperm mitochondrial function in patients with altered sperm parameters^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Condorelli RA, et al. Effects of myoinositol on sperm mitochondrial function in-vitro. *Eur Rev Med Pharmacol Sci*. 2011 Feb;15(2):129-34.
- [2]. Haris M, et al. In vivo mapping of brain myo-inositol. *Neuroimage*. 2011 Feb 1;54(3):2079-85.
- [3]. Paquette AF, et al. The human milk component myo-inositol promotes neuronal connectivity. *Proc Natl Acad Sci U S A*. 2023 Jul 25;120(30):e2221413120.
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Caution: Product has not been fully validated for medical applications. For research use only.

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