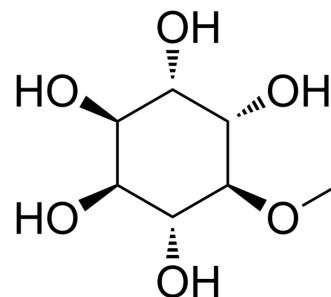


## D-Pinitol

|                           |   |       |         |
|---------------------------|---|-------|---------|
| <b>Cat. No.:</b>          | HY-N0655                                      |       |         |
| <b>CAS No.:</b>           | 10284-63-6                                    |       |         |
| <b>Molecular Formula:</b> | C <sub>7</sub> H <sub>14</sub> O <sub>6</sub> |       |         |
| <b>Molecular Weight:</b>  | 194.18  |       |         |
| <b>Target:</b>            | Influenza Virus                               |       |         |
| <b>Pathway:</b>           | Anti-infection                                |       |         |
| <b>Storage:</b>           | Powder  | -20°C | 3 years |
|                           |   | 4°C   | 2 years |
|                           | In solvent                                    | -80°C | 2 years |
|                           |   | -20°C | 1 year  |



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 125 mg/mL (643.73 mM; Need ultrasonic)

| Preparing Stock Solutions | Solvent Concentration | Mass      |            |            |
|---------------------------|-----------------------|-----------|------------|------------|
|                           |                       | 1 mg      | 5 mg       | 10 mg      |
|                           | 1 mM                  | 5.1499 mL | 25.7493 mL | 51.4986 mL |
|                           | 5 mM                  | 1.0300 mL | 5.1499 mL  | 10.2997 mL |
|                           | 10 mM                 | 0.5150 mL | 2.5749 mL  | 5.1499 mL  |

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (10.71 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (10.71 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (10.71 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

D-pinitol (3-O-Methyl-D-chiro-inositol) is a natural compound presented in several plants, like Pinaceae and Leguminosae plants. D-pinitol exerts hypoglycemic activity and protective effects in the cardiovascular system<sup>[1][2]</sup>. D-pinitol has antiviral and larvicidal activities<sup>[3]</sup>.

#### In Vitro

D-pinitol promotes apoptosis in MCF-7 cells via induction of p53 and Bax and inhibition of Bcl-2 and NF-κB<sup>[3]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

- [1]. Gao Y, et al. Effects of D-Pinitol on Insulin Resistance through the PI3K/Akt Signaling Pathway in Type 2Diabetes Mellitus Rats. *J Agric Food Chem.* 2015 Jul 8;63(26):6019-26.
- [2]. Moreira LN, et al. Activation of eNOS by D-pinitol Induces an Endothelium-Dependent Vasodilatation in Mouse Mesenteric Artery. *Front Pharmacol.* 2018 May 22;9:528.
- [3]. Rengarajan T, et al. D-pinitol promotes apoptosis in MCF-7 cells via induction of p53 and Bax and inhibition of Bcl-2 and NF- $\kappa$ B. *Asian Pac J Cancer Prev.* 2014;15(4):1757-62.
- [4]. Sethi G, et al. Pinitol targets nuclear factor-kappaB activation pathway leading to inhibition of gene products associated with proliferation, apoptosis, invasion, and angiogenesis. *Mol Cancer Ther.* 2008 Jun;7(6):1604-14.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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