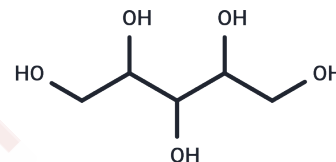


## Xylitol

## Chemical Properties

CAS No. :	87-99-0
Formula:	C <sub>5</sub> H <sub>12</sub> O <sub>5</sub>
Molecular Weight:	152.15
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Xylitol (Ribitol) is a five-carbon sugar alcohol derived from XYLOSE by reduction of the carbonyl group. It is as sweet as sucrose and used as a noncariogenic sweetener.
Targets(IC50)	Endogenous Metabolite,Antibacterial,Autophagy,ATG
In vitro	Xylitol is reported to have an inhibitory effect on LPS-induced inflammatory cytokine expression[2]. Xylitol strongly inhibits tube formation, migration, and invasion of HUVECs. Xylitol decreases the mRNA expression of key angiogenic molecules and their receptors (VEGF, KDR, bFGF and bFGFR-II) in a dose-dependent manner. Also, it suppresses NF-κB and Akt activation of HUVECs[1].
In vivo	Xylitol triggers the release of insulin in dogs[3] and inhibits in vivo angiogenesis. It prominently inhibits the formation of neo-microvessels in the Matrigel assay, and reduces the hemoglobin content in the Matrigel plug[1].
Cell Research	In vitro tube formation assay:HUVECs (2×10 <sup>4</sup> cells) are seeded on a layer of previously polymerized Matrigel and treated with or without xylitol. Matrigel culture is incubated at 37°C. After 6 h, changes in cell morphology are captured through a phase contrast microscope and photographed at ×40 magnification. Each sample is assayed in duplicate and independent experiments are repeated three times. (Only for Reference)

## Solubility Information

Solubility	H <sub>2</sub> O: 197.2 mM,Sonication is recommended. DMSO: 250 mg/mL (1643.12 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2.5 mg/mL (16.43 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	6.5725 mL	32.8623 mL	65.7246 mL
5 mM	1.3145 mL	6.5725 mL	13.1449 mL
10 mM	0.6572 mL	3.2862 mL	6.5725 mL
50 mM	0.1314 mL	0.6572 mL	1.3145 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

- Yi EY, et al. *Int J Oncol.* 2013, 43(1):315-320.  
Han SJ, et al. *Clin Diagn Lab Immunol.* 2015, 12(11):1285-1291.  
Kuzuya T, et al. *Endocrinology.* 1969, 84(2):200-207.

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