

L-(+)-Arabinose

Chemical Properties

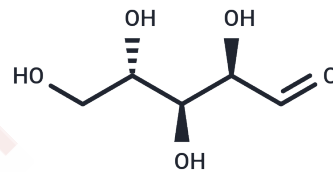
CAS No. : 5328-37-0

Formula: C₅H₁₀O₅

Molecular Weight: 150.13

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	L-(+)-Arabinose selectively inhibits intestinal sucrase in a non-competitive manner, thereby preventing glucose elevation induced by sucrose intake.
Targets(IC50)	Endogenous Metabolite
In vitro	L-(+)-Arabinose is associated with ribose-5-phosphate isomerase deficiency, an inborn metabolic error[1]. It selectively inhibits intestinal sucrase in a noncompetitive manner, thereby suppressing the increase in plasma glucose following sucrose consumption[1].
In vivo	L-(+)-Arabinose feeding reduced the weights of epididymal adipose tissue in rats. Moreover, plasma insulin and triacylglycerol concentrations were significantly reduced by dietary L-(+)-Arabinose[1]. L-(+)-Arabinose suppresses gluconeogenesis through modulating AMP-activated protein kinase in metabolic disorder mice[2].

Solubility Information

Solubility	DMSO: 60 mg/mL (399.65 mM),Sonication is recommended. H ₂ O: 400 mg/mL (2664.36 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: 1 mg/mL (6.66 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

	1mg	5mg	10mg
1 mM	6.6609 mL	33.3045 mL	66.6089 mL
5 mM	1.3322 mL	6.6609 mL	13.3218 mL
10 mM	0.6661 mL	3.3304 mL	6.6609 mL
50 mM	0.1332 mL	0.6661 mL	1.3322 mL

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

Osaki S, et al. L-arabinose feeding prevents increases due to dietary sucrose in lipogenic enzymes and triacylglycerol levels in rats. *J Nutr.* 2001 Mar;131(3):796-9.

Wang Y, et al. L-Arabinose suppresses gluconeogenesis through modulating AMP-activated protein kinase in metabolic disorder mice. *Food Funct.* 2021 Mar 1;12(4):1745-1756.

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