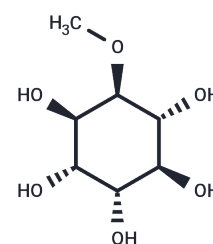


L-quebrachitol

Chemical Properties

CAS No. :	642-38-6
Formula:	C7H14O6
Molecular Weight:	194.18
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	L-quebrachitol is a natural product.L-quebrachitol may promote osteoblastogenesis by triggering the BMP-2-response as well as the Runx2, MAPK, and Wnt/ β -catenin signaling pathway.
Targets(IC50)	Wnt/beta-catenin
In vitro	L-quebrachitol significantly promotes proliferation and cell DNA synthesis. It also enhances mineralization accompanied by increases in mRNA expression of bone matrix proteins including alkaline phosphatase (ALP), collagen type I (Coll), osteocalcin (OCN), and osteopontin (OPN). In addition, l-quebrachitol upregulates the mRNA and protein expression of bone morphogenetic protein-2 (BMP-2) and runt-related transcription factor-2 (Runx2), while down-regulating the receptor activator of the nuclear factor- κ B ligand (RANKL) mRNA level. Moreover, the expression of regulatory genes associated with the mitogen-activated protein kinase (MAPK) and wingless-type MMTV integration site (Wnt)/ β -catenin signaling pathways are also upregulated.L-quebrachitol may promote osteoblastogenesis by triggering the BMP-2-response as well as the Runx2, MAPK, and Wnt/ β -catenin signaling pathway.
Cell Research	The total RNA from cells treated with l-quebrachitol was extracted using the TriPure Isolation Reagent .RNA (1 μ g) was reverse transcribed using the Transcriptor First Strand cDNA Synthesis Kit to cDNA.The qRT-PCR analysis was performed using the EvaGreen HRM Mix .GAPDH was used as an internal control.The relative expression ratio was calculated using the $2^{-\Delta\Delta Ct}$ method.

Solubility Information

Solubility	DMSO: 22.5 mg/mL (115.87 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.1499 mL	25.7493 mL	51.4986 mL
5 mM	1.030 mL	5.1499 mL	10.2997 mL
10 mM	0.515 mL	2.5749 mL	5.1499 mL
50 mM	0.103 mL	0.515 mL	1.030 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.

Reference

Yodthong T, Kedjarune-Leggat U, Smythe C, et al. l-Quebrachitol Promotes the Proliferation, Differentiation, and Mineralization of MC3T3-E1 Cells: Involvement of the BMP-2/Runx2/MAPK/Wnt/ β -Catenin Signaling Pathway[J].

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel: 781-999-4286 E_mail: info@targetmol.com Address: 36 Washington Street, Wellesley Hills, MA 02481