

L-Borneol 7-O-[β -D-apiofuranosyl-(1 \rightarrow 6)]- β -D-glucopyranoside

Chemical Properties

CAS No. :	88700-35-0
Formula:	C ₂₁ H ₃₆ O ₁₀
Molecular Weight:	448.50
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-Borneol 7-O-[β -D-apiofuranosyl-(1 \rightarrow 6)]- β -D-glucopyranoside alleviates myocardial ischemia-reperfusion injury in rats and hypoxic/reoxygenated injured myocardial cells via regulating the PI3K/AKT/mTOR signaling pathway. L-Borneol 7-O-[β -D-apiofuranosyl-(1 \rightarrow 6)]- β -D-glucopyranoside is therefore studied in cardiovascular ischemia-reperfusion experimental models to investigate PI3K/AKT/mTOR pathway modulation, cellular stress response regulation, and cardiomyocyte injury-associated signaling dynamics in hypoxia/reoxygenation systems.
Targets(IC50)	Akt,PI3K
In vivo	Method: Cardiac histopathological analysis using HE staining and TTC staining was performed in IR rats with L-Borneol 7-O-[β -D-apiofuranosyl-(1 \rightarrow 6)]- β -D-glucopyranoside (LBAG) or Ver pretreatment. Result: IR group showed irregular myocardial cell arrangement, partial lysis in the infarct border zone, and cardiac muscle fiber breakage. LBAG or Ver pretreatment partially reversed these histological changes. TTC staining showed increased myocardial infarction size in MIRI rats, while LBAG or Ver pretreatment significantly reduced infarct areas compared with the IR group.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2297 mL	11.1483 mL	22.2965 mL
5 mM	0.4459 mL	2.2297 mL	4.4593 mL
10 mM	0.223 mL	1.1148 mL	2.2297 mL
50 mM	0.0446 mL	0.223 mL	0.4459 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

Tong Z, Li G, Su C, Zhou L, Zhang L, Chen Q, et al. L-Borneol 7-O-[β -D-Apiofuranosyl-(1 \rightarrow 6)]- β -D-Glucopyranoside Alleviates Myocardial Ischemia-Reperfusion Injury in Rats and Hypoxic/Reoxygenated Injured Myocardial Cells via Regulating the PI3K/AKT/mTOR Signaling Pathway. J Immunol Res. 2022 May 12;2022:5758303. doi:10.1155/2022/5758303 PubMed PMID: 35600046; PubMed Central PMCID: PMC9119761.

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