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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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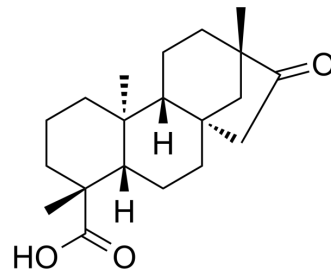
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Isosteviol

Cat. No.:	HY-N0872		
CAS No.:	27975-19-5		
Molecular Formula:	C ₂₀ H ₃₀ O ₃		
Molecular Weight:	318.45		
Target:	Reactive Oxygen Species; Topoisomerase		
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Cell Cycle/DNA Damage		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (314.02 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.1402 mL	15.7011 mL	31.4021 mL
	5 mM	0.6280 mL	3.1402 mL	6.2804 mL
	10 mM	0.3140 mL	1.5701 mL	3.1402 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: ≥ 2.75 mg/mL (8.64 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.75 mg/mL (8.64 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.75 mg/mL (8.64 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Isosteviol ((-)-Isosteviol) is a derivative of Stevioside through acid catalyzed hydrolysis of Stevioside. Isosteviol inhibits DNA polymerase and DNA topoisomerase and has antibacterial, anticancer and anti-tuberculosis effects^{[1][2][3][4]}.

In Vitro

Isosteviol ((-)-Isosteviol) dose-dependently relaxed the vasopressin (10⁻⁸ M)-induced vasoconstriction in isolated aortic rings with or without endothelium. However, in the presence of potassium chloride (3×10⁻² M), the vasodilator effect of isosteviol

on arterial strips disappeared. Only the inhibitors specific for the ATP-sensitive potassium (KATP) channel or small conductance calcium-activated potassium (SKCa) channel inhibited the vasodilator effect of isosteviol in isolated aortic rings contracted with 10^{-8} M vasopressin^[1].

The attenuation by isosteviol of the vasopressin- and phenylephrine-induced increase in $[Ca^{2+}]_i$ was inhibited by glibenclamide, apamin and 4-aminopyridine but not by charybdotoxin. Furthermore, the inhibitory action of isosteviol on $[Ca^{2+}]_i$ was blocked when A7r5 cells co-treated with glibenclamide and apamin in conjunction with 4-aminopyridine were present^[2].

Isosteviol (1-100 micromol/l) inhibits angiotensin-II-induced DNA synthesis and endothelin-1 secretion. Measurements of 2'7'-dichlorofluorescein diacetate, a redox-sensitive fluorescent dye, showed an isosteviol-mediated inhibition of intracellular reactive oxygen species generated by the effects of angiotensin II^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Wong KL, et al. Isosteviol acts on potassium channels to relax isolated aortic strips of Wistar rat. *Life Sci.* 2004 Mar 26;74(19):2379-87.
- [2]. Wong KL, et al. Isosteviol as a potassium channel opener to lower intracellular calcium concentrations in cultured aortic smooth muscle cells. *Planta Med.* 2004 Feb;70(2):108-12.
- [3]. Wong KL, et al. Antiproliferative effect of isosteviol on angiotensin-II-treated rat aortic smooth muscle cells. *Pharmacology.* 2006;76(4):163-9.
- [4]. Asad Ullah, et al. Bioactivity Profile of the Diterpene Isosteviol and its Derivatives. *Molecules.* 2019 Feb 14;24(4):678.
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Caution: Product has not been fully validated for medical applications. For research use only.

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