

Hardwickiic acid

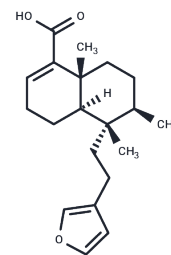
Chemical Properties

CAS No. : 1782-65-6

Formula: C₂₀H₂₈O₃

Molecular Weight: 316.43

Storage: Store at low temperature, Keep away from direct sunlight
 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	Hardwickiic acid ((-)-Hardwickiic acid) is a natural compound derived from Pulicaria gnaphalodes with anti-injury receptor properties. It blocks tetrodotoxin-sensitive voltage-dependent sodium channels and exhibits anti-inflammatory and insecticidal activity.
Targets(IC50)	Parasite, Sodium Channel
In vitro	Hardwickiic acid was isolated from the oleoresins of Copaifera spp. Hardwickiic acid did not show cytotoxicity in normal cell lines, nor did it show significant changes in viability of tumoral line cells. Hardwickiic acid (92.7% ± 4.9%) at 100 mM inhibited nitric oxide production in macrophages activated by lipopolysaccharide. In this assay, Hardwickiic acid did not inhibit tumor necrosis factor-α production.[1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1603 mL	15.8013 mL	31.6026 mL
5 mM	0.6321 mL	3.1603 mL	6.3205 mL
10 mM	0.316 mL	1.5801 mL	3.1603 mL
50 mM	0.0632 mL	0.316 mL	0.6321 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

- de S Vargas F, et al. Biological Activities and Cytotoxicity of Diterpenes from *Copaifera* spp. Oleoresins. *Molecules*. 2015 ; 20(4):6194-6210.
- Kuete V, et al. Antimicrobial activity of the methanolic extract, fractions and compounds from the stem bark of *Irvingia gabonensis* (Ixonanthaceae). *J Ethnopharmacol*. 2007 ; 114(1):54-60.
- Bandara BM, et al. Isolation and Insecticidal Activity of (-)-Hardwickiic acid from *Croton aromaticus*. *Planta Med*. 1987 Dec ; 53(6):575.
- Cai S, et al. (-)-Hardwickiic Acid and Hautriwaic Acid Induce Antinociception via Blockade of Tetrodotoxin-Sensitive Voltage-Dependent Sodium Channels. *ACS Chem Neurosci*. 2019 ; 10(3):1716-1728.
- Pittaluga A, et al. Effects of the neoclerodane Hardwickiic acid on the presynaptic opioid receptors which modulate noradrenaline and dopamine release in mouse central nervous system. *Neurochem Int*. 2013 ; 62(4):354-359.

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