

Product Data Sheet

Product Name: Niranthin
Cat. No.: GC17997

Chemical Properties

Cas. No. 50656-77-4

Chemical Name *rel*-6-[(2R,3R)-4-(3,4-dimethoxyphenyl)-2,3-bis(methoxymethyl)butyl]-4-methoxy-1,3-benzodioxole

SMILES COC1=CC(C[C@@H](COC)[C@H](COC)CC2=CC(OC)=C(OC)C=C2)=CC3=C1OCO3

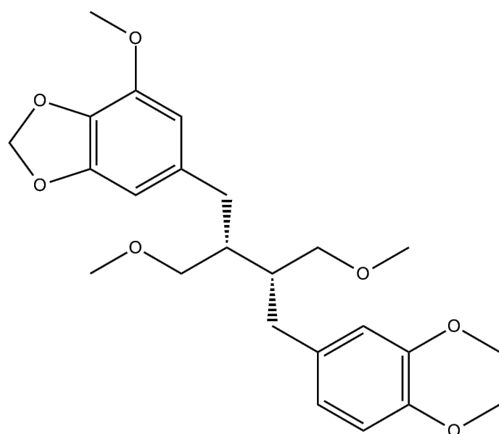
Formula $C_{24}H_{32}O_7$ M.Wt 432.5

Solubility DMF: 15 mg/ml, DMSO: 10 mg/ml, Ethanol: 5 mg/ml Storage Store at -20°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

IC50: 15.6 μM and 25.1 μM for inhibiting the secretion of HBsAg and HBeAg, respectively.

Niranthin is a natural lignin isolated from the genus *Phyllanthus*, with antiviral activities both in vitro and in vivo. Niranthin also exerts anti-inflammatory and anti-allodynic activities.

Caution: Product has not been fully validated for medical applications. For research use only.

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In Vitro: In human hepatoma cell line MS-G2 which synthesizes hepatitis B viral particles, Niranthin was screened among 25 pure compounds which were isolated from several phyllanthus species with the most potent anti-HBV activity ($EC_{50} = 33.6 \mu M$) by effectively suppressing the expression of HBsAg and HBeAg, with the highest inhibition of 74.3% [1]. Besides, in human HBV-transfected liver cell line HepG2.2.15, Niranthin could significantly inhibit the secretion of HBsAg and HBeAg after treatment for 144 h, with the IC_{50} values of $15.6 \mu M$ and $25.1 \mu M$, respectively [2].

In Vivo: In duck hepatitis B virus (DHBV) infected ducks, intragastric administration of Niranthin could significantly decrease the plasma DHBV DNA levels, with the mean inhibition percentage of 70.72%, 75.23%, and 90.87% at the dose of 25, 50, and 100 mg/kg/day, respectively. Niranthin could also significantly inhibit the serum HBsAg, HBeAg, ALT, and AST levels [2].

Clinical trial: no data available.

References:

- [1] Huang R, Huang Y, Ou J, et al. Screening of 25 compounds isolated from Phyllanthus species for anti-human hepatitis B virus in vitro[J]. Phytotherapy Research, 2003, 17(5): 449-453.
- [2] Liu S, Wei W, Li Y, et al. In vitro and in vivo anti-hepatitis B virus activities of the lignan nirtetralin B isolated from Phyllanthus niruri L.[J]. Journal of Ethnopharmacology, 2014, 157(2): 1061-1067.

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